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Fall Prevention Among Older Adults Living in the Community

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FALL PREVENTION AMONG OLDER ADULTS LIVING IN THE COMMUNITY

by

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Clarissa Silva Lopez

FALL PREVENTION AMONG OLDER ADULTS LIVING IN THE COMMUNITY

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Older adults are within the fastest population growth rate in the United States, and as the population ages, the potential for falls increases (DHHS, 2011). This was a mixed-method explanatory study that investigated the perceptions of older adults regarding the usefulness, adequacy, and positive experience of fall information among older adults living in the community when received from healthcare professionals during physician's office visits.

The research questions were:

1. What is the relationship among perceptions of usefulness, adequacy, and positive experience of fall information among older adults?

2. Is there a difference in the perceptions of usefulness and adequacy among older adults who receive fall information in a positive manner and those who receive fall information in a negative manner?

3. Is there a difference in the perceptions of useful and adequacy of fall prevention information between older adults who live alone and those who live with someone?

The results to question 1 were that there were strong positive significant correlations. The results to question 2 were that the null hypothesis was rejected. There is evidence to assume that those who received fall prevention information in a positive manner reported it to be more useful

and adequate. The results to question 3 were that there was not enough evidence to reject the hypothesis of no difference in the perceptions of usefulness or adequacy of fall prevention information among participants who live alone and those who live with someone.

The qualitative questions were:

1. Tell me a little more about what you need from healthcare providers regarding fall prevention information.
2. Tell me what you think healthcare providers should be discussing with older adults regarding fall prevention.
3. Tell me a little bit more what you feel would be beneficial to you in terms of fall prevention information.
4. Tell me about your experience of getting fall prevention information at a doctor's office.

The analyses of the open-ended data were repetitive themes expressed by the participants. The analyses of the closed-ended questions were confirming statements of the same themes found in the closed-ended interviews.

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The aging process should be a joyous experience where one is able to reflect on life's accomplishments and experiences. Older adults should be able to enjoy their children and grandchildren. The ability to accompany others without the limitations that a fall injury creates should be part of an older adult's everyday experience. Many older adults in the community live in their homes. While some older adults have someone who lives within the residence, many older adults live alone (Shah et al., 2010).

Many older adults will need care by someone as they become frail. However, older adults may not want to depend on family so they reach out to healthcare providers. Most adults living in the community will remain on their own until they can no longer provide for themselves. If an older adult refuses to submit to care from healthcare providers, it is often because fear of the loss of independence. The cost of assisted care may also be a factor that needs consideration and careful planning. The cost of living at a nursing home or bringing in hired help into the home is high. Nursing home insurance is available, but it may not cover the total balance (Roberto, Allen, & Blieszner, 2001).

Today, older adults in the United States are the fastest growing segment of the population. The U.S. Census Bureau (2012) reported that 38.6 million persons are age 65 or over. Of these persons, 44% are male and 56% are female. The expected growth is projected to increase to 55 million by 2020 and 72.1 million by 2030 (U.S. Department of Health and Human Services, 2011).

In 2008, 52% of persons living alone reported having fallen in their home as compared to 48% of those who did not live alone (Centers for Disease Control and Prevention [CDC], 2008c; Elliott, Painter, & Hudson, 2009). A fall can happen on any given day and at any time. Travel within the confines of an older adult's residence should be safe and not a treacherous journey

(Shah et al., 2010). In 2010, 115 per 1,000 older adults living in the community reported a fall to someone in healthcare (CDC, 2012b).

Nonfatal falls in 2006 accounted for 2.3 million injuries requiring emergency room visits resulting in 662,000 persons being hospitalized (Jeske et al., 2006). Statistics show that 20% to 30% of adults aged 65 and over will fall yearly and will need to have medical attention (CDC, 2008c; French et al., 2007). Dickinson et al. (2011) posited that falls result in a plethora of serious consequences. Falls are considered a leading cause of injury and death for the older adult population. The number of falls nearly doubled between 2003 and 2010. The CDC (2012a) reported 2.43 million falls in 2010 and the numbers continued to rise. Fatal falls account for 18,000 deaths yearly, usually because of head injuries.

In 2010, the financial impact of fall-related injuries was $30 billion in the United States (CDC, 2012a). As time progresses, the cost of falls among the older adult population is expected to exceed $19 billion yearly and escalate to $67.7 billion by 2020 (CDC, 2014). However, these financial impacts do not include the cost of long-term effects of falls. Falls also create indirect financial burdens for older adults that include disability and dependence, inability to work, and poor quality of life (CDC, 2008a). Long-term effects from a fall can result in disability, hospitalization, lost productivity, poor quality of life, and accidental death (Kannus, Sievanen, Palvanen, Jarvinen, & Parkkari, 2005).

Many older adults who live in residential communities have fallen more than once (Hosseini & Hosseini, 2008; Thomas, Edelberg, & Tinetti, 2003). When a fall occurs, 50% of those who fall will never be able to function as they did before. Falls can result in anxiety and depression causing a hindrance to independence. Considering the emotional effects of a fall, older adults may not want to leave their home for fear of having another fall (Jeske et al., 2006).

Repeated severe injuries created by falls can make the difference between dependence and independence seriously interfering with growing old gracefully (CDC, 2008a; Elliott et al., 2009). The crippling effects of falls can make life unbearable. Falls may result in injuries to the body such as lacerations and fractures (McClure et al., 2005). The possibility of head trauma can lead to inability to maintain balance, confusion, or death. Injuries to the upper extremities can cause difficulty in holding onto hand rails when walking. Injuries of the hips, pelvis, and spinal area can lead to mobility problems (McClure et al., 2005; Thomas et al., 2003).

One in three adults 65 and above will fall every year (Hosseini & Hosseini, 2008). Many falls have resulted in death for the older adults. Americans age 85 and above suffer the greatest number of fall injuries. Older adults are at risk of falling, especially when they are out and about in the community. Older frail persons are more likely to fall due to home hazards as these older adults are not as mobile in interacting with the environment (Hosseini & Hosseini, 2008; Lord, Menz, & Sherrington, 2006). According to the literature, frail adults over the age of 80 who live in the community will fall at least once in a 12-month time period (Oliver, 2007).

Addressing Fall Prevention

Anticipation of a fall risk may prevent falls among older adults living in the community. Falls among older adults living in the community are a serious matter. The consequences of falls can be physical, financial, and emotional causing detrimental effects to the person, family, and society. The physical, financial, and emotional impact of a fall are issues that need consideration. The problem among older adults living in the community who fall is that they continue to fall despite fall prevention information available to the public. Healthcare professionals educate about falls risks to the older adult, but falls continue to occur (McClure et al., 2005).

Older adults who are mobile tend to be more prone to a fall, so getting fall prevention information to this population is needed in order to promote a longer possibility of independence. Some older adults deny ever having had fall prevention advice. However, because these older adults were active, they did not view the fall prevention advice as pertinent to them at the time (Yardley & Todd, 2007). Japsen (2012) and Yardley and Todd (2007) suggested that active older adults do not believe that fall precautions pertain to them because they are not frail and brittle; so, as a result, active older adults tend to be at greater risk for falls.

Healthcare facilities in the United States are mandated by the Centers for Medicare & Medicaid Services (2012) to have fall prevention programs as part of the quality monitoring and performance improvement, while the home environments are left to the healthcare professionals practicing in the community. Most daily healthcare is managed in the residence. Nine million older adults live without a caregiver. Because older adults are living alone and caring for themselves in the home, fall prevention information is important (Hosseini & Hosseini, 2008; Thomas et al., 2003). Education about prevention of falls in the home can help provide for a healthier living situation for the older adult (French et al., 2007).

An opportunity exists to provide a first line of educational defense about fall prevention when older adults visit their physician here in the United States (Cuenca, 2012; Sura, & Shah, 2010). The Affordable Care Act 2011 has made it possible for additional visits known as Medicare Wellness Visits (MWV) to be provided to older adults. Wellness visits are not the same as medical examinations. MWV visits are an educational opportunity for older adults to discuss with physicians various topics including fall prevention, eating habits, and medications (Cuenca, 2012; Sura & Shah, 2010). However, Japsen (2012) found that older adults are not

aware of the program. Only 1.3 million Medicare older adults have used the benefits of the program.

Since 2011, many physicians have been well funded by the Medicare Wellness Visit (MWV) programs to provide educational opportunities for older adults (Japsen, 2012). MWV visits are relatively new to physicians. Physicians can find meeting the criteria of documentation to satisfy the wellness visit challenging in obtaining reimbursement. By 2012, only one physician office had made progress with the work flow process to be able to provide MWV and collect reimbursement (Cuenca, 2012). The dilemma remaining is whether more physicians will be participating in the MWV programs in the future.

Information about fall prevention assists older adults to live in independence with a good quality of life (Watson, Zhang, & Wilkinson, 2010). It is in society's best interest to care about how and why older adults fall and what can be done to prevent falls, especially for those older adults living in the community. Falls among these older adults are not exclusive to the United States; the problem is global. Information about fall prevention among the older adult population needs to be addressed by all persons working in healthcare (Oliver, 2007). Healthcare workers need to be cognizant of the perils that can occur among older adults living in the community (Naik, Burnett, Pickens-Pace, & Dyer, 2008).

Physician involvement in the educational process of fall prevention is often minimal. Periodicals support annual screening of older adults for falls at the primary physician's office (Kuehn, 2010). Fall prevention information offered through wellness visits can be a preventive measure that helps keep our nation's older adults safe and living productive lives in the community. However, most information relating to fall prevention is still focused within the hospital setting (Cuenca, 2012; Sura & Shah, 2010).

Statement of the Problem

Older adults continue to fall even though there is a large amount of fall prevention information available to the public in the healthcare arena and on the Internet (Watson et al., 2010). As the U.S. population continues to age and healthcare becomes more costly, it is necessary to conduct research to determine how fall prevention information is perceived among older adults living in the community. In previous research, Thomas et al. (2003) focused on methods of preventing falls in the home and in the community. Yet, there is minimal to no research available to explain how older adults perceive the fall prevention information given by healthcare professionals and whether it is perceived as adequate or useful to the older adult. The research encourages the use of safety devices, such as canes and walkers. Canes and walkers are used more by older adults who live without a caregiver (Davis, Moritz, Neuhaus, Barclay, & Gee, 1997; Elliott et al., 2009; Eshbaugh, 2008).

In 2006, a study found older adults did not want to know about fall risk prevention. Instead, they wanted to know what could be done to promote independence (Yardley, Donovan-Hall, Francis, & Todd, 2006). New research is in order to determine if these reasons reflect today's older adults living in the local community (Yardley et al., 2006). It is the assimilation and the potential for utilization of the fall prevention information by the older adult that is of greatest concern.

Purpose of the Study

The purpose of this mixed method explanatory study was to investigate the perceptions of older adults regarding the usefulness, adequacy, and positive experience of fall prevention information when received from healthcare professionals.

Research Questions

The research study focused on three main research questions through a survey instrument from the participants and a subset of qualitative questions. The questions were as follows:

1. What is the relationship among perceptions of usefulness, adequacy, and positive receipt of fall prevention information among older adults?
2. Is there a difference in the perceptions of usefulness and adequacy among older adults who receive fall prevention information in a positive manner and those who receive fall prevention information in a negative manner?
3. Is there a difference in the perceptions of useful and adequacy of fall prevention information between older adults who live alone and those who live with someone?
4. What are older adults' perceptions of needs and experiences of fall prevention education provided by healthcare providers?

The qualitative questions explained the statistical results. These questions were asked in a separate interview of four older adults who were part of the fall prevention seminars.

Significance of the Study

A study of the older adult's perception of usefulness, adequacy, and positive experience when receiving fall prevention information provided by healthcare professionals will give insight as to how the older adult receives the fall prevention information provided by healthcare professionals (Watson et al., 2010).

The persons who will benefit from the study include physicians, nurses, and allied healthcare professionals who administer fall prevention information. Healthcare professionals are in need of research that affords feedback on whether fall prevention information provided to older adults is adequate and applied to the home environment to prevent falls. Healthcare

professionals are concerned whether the information offered to older adults as a safe solution to a potential problem is comprehended and implemented by the persons for which it is planned.

Persons who care for the gerontological population will benefit from this study. The study shows what older adult participants perceive and how they use fall prevention information given by healthcare professionals. A study like this can provide insight as to how well fall prevention information is processed, retained, and practiced among older adults living in the community. Understanding what the older adult takes away from a healthcare provider during an office visit can provide insight to what changes may need to occur to increase effectiveness of fall prevention education. These revelations can be used to make needed changes in how fall prevention information is delivered.

Theoretical Framework

The theoretical framework consists of two models that include Orem (as cited in Alligood, 2004) self-care theory and this researcher's model theory of perceptions (Lopez, 2013). In proposing that fall prevention is an educational concern for healthcare professionals, a theoretical conceptual framework is used to support the relationship of perceptions to usefulness, adequacy, and positive experience of fall prevention.

Orem's theory of self-care. Orem (as cited in Alligood, 2004) posited that compassion for humans creates a path to self-care. Her self-care theory addresses the human values in dedication and nurturing of others. Orem's theory on self-care stresses the need for people to be concerned for their own self-care and for that of others in the family. Through self-care, individual actions are directed to the self or the environment for regulating circumstances that are in the interest of the person's life, health, and well-being. Self-care calls for preventative

processes. It is in these preventative processes that self-care theory applies to prevention of falls in the older adult population (Alligood, 2004).

Orem's self-care theory has four concepts. First, the day-to-day of life, health, and well-being is regulated by internal and external conditions. Individuals provide for the prevention and control of disease and injury for the self (Alligood, 2004). Self-care allows the person to maintain a healthy well-being (Parissopoulos & Kotzabassaki, 2004). Second, people must maintain a balance between activity and rest. Self-care is learned and must be done deliberately. Third, people must maintain a balance between solace and social interaction. Self-care is conducted within the stages of growth and development of the person. Fourth, people must try to be normal by maintaining a realistic self-concept and take action to protect their structural and functional ability. Indubitably, the complexity of self-care is dependent on the number of health deficits experienced (Taylor, 2006).

Orem's theory is applicable to falls prevention when the older adult is able to participate in self-care activities. Older adults who perceive the usefulness of fall prevention information use that information to prevent falls and thus participate in the care of self, meaning one's person. Orem's concept of health relates to the older adult's ability to function not only physically, but in a psychological, interpersonal, and social manner (Alligood, 2004). If the older adult is able to perceive the experience of fall prevention education as adequate and useful, the application of the knowledge learned may be more likely established in the home.

Orem's concept of environment is the achievement of self-growth. This occurs through balance of psychosocial circumstance with physical conditions. Orem's nursing concepts are applied as the art of helping those older adults who may or may not be able to perform self-care. Self-care theory emphasizes that it is important for older adults to be empowered to care for

themselves. In the plan of care, healthcare professionals must include interventions that prepare the older adults to care for themselves so that their lives can be better (Comley, 1994; Taylor, 2006).

Theory of perception of fall prevention. In addition to Orem's self-care model, a model theory of perception of fall prevention provided by healthcare professionals was created by this researcher to exemplify the process of how information is perceived through effect of the experience. The model connects usefulness and adequacy to the understanding and comprehension of the older adult perceived as a positive experience.

Perception is the ability to see, hear, or become aware. Perception also refers to a state of being aware, a way of regarding, or an intuitive understanding (J. Beauford, personal communication, October 14, 2013). The intellectual intake of perception makes it difficult to predict behavior. In this study, perception referred to what adults receive, understand, and learn from the fall prevention education from their healthcare professional. Learning occurs through the cognitive process. Learning regulates how we process information to memory. The perception of the importance of information needs to be committed to cognitive memory to be useful (Kolb, 1984).

The perception of experience must be defined so that an understanding of how it applies to older adults who receive fall prevention information can be studied. The manner in which older adults are given the information can have an effect on whether it will be used. Non-reflective knowledge occurs through the act of remembering an experience (Merriam, Caffarella, & Baumgartner, 2007).

The actions of people become the result of being told to do something. The act of planning, observing, or reflecting upon an experience is reflective knowledge. The older adult

receives information and creates either a positive or negative memory about the information. The ability to reflect back on fall prevention information is reflective knowledge (Merriam et al., 2007).

The use of fall prevention information can create a safer situation in the home (Geddes & Grosset, 2002). To be used, the information must be seen as useful and adequate. The operational definition of *usefulness* is the perception that putting information to use would create a positive result. The definition of *adequacy* for this study was the perception that the information received about fall prevention is sufficient to meet the needs of the learner (Geddes & Grosset, 2002). If the fall prevention information received is useful and adequate, then the older adult is able to apply the information to practice decreased risk of falls.

The perceptions of usefulness, adequacy, and positive receipt of fall prevention information depend upon the delivery of the information by the healthcare professional. When the healthcare professional provides fall prevention information to the older adult, the perception of the experience can result in cognitive knowledge and the recall of data given by the healthcare professional. The older adult can then describe or reproduce what is learned. The perception of the adequacy of the information about fall prevention is then integrated into practice. The older adult takes the information learned from the healthcare professional and places the new knowledge into correcting the issues in the home environment that could create a fall. The perception of the usefulness of fall prevention information can result in structural changes in the home to prevent falls. The concept acquired about fall prevention can be applied toward the home environment to cause a better situation than previously existed.

This researcher's theory of the perceptions of fall prevention information provided by healthcare professionals allows for a figurative explanation of the concept of the variables in the study as presented in in Figure 1.

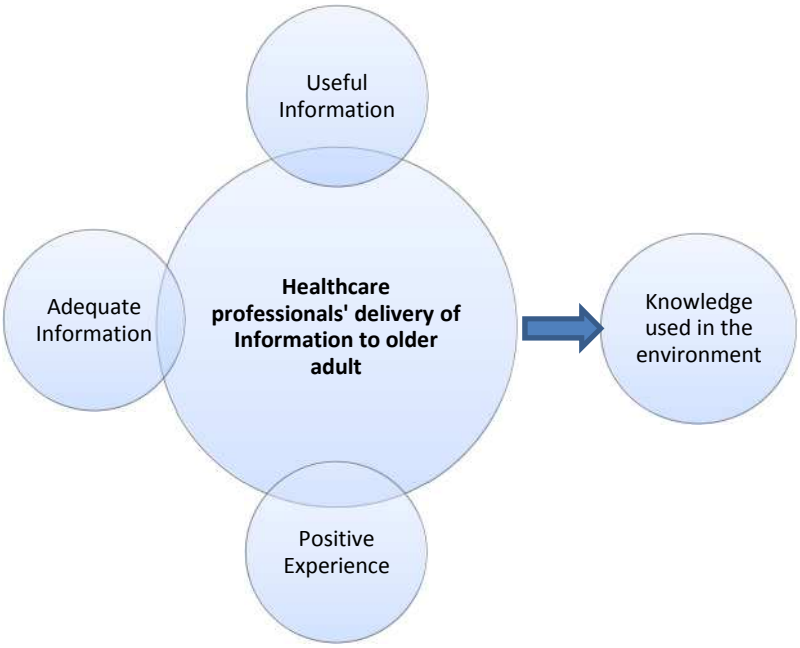

Figure 1. Model theory of perceptions of fall prevention provided by healthcare professionals in older adults.

Research Design

The survey design is used to provide descriptions in populations. The survey design can also be used to describe the relationships among variables or to compare variables. Research questions can be addressed using a survey design because survey results guide interpretations about a population (Creswell, 2008).

The study examined the perceptions of older adults who live alone and those who live with someone to determine their reception, comprehension, and application of fall prevention information. The relationships among the perceptions of the usefulness, adequacy, and positive experience of fall prevention information were studied. The perceptions of fall prevention information received in a positive or negative manner were compared. Perceptions of fall

prevention information between older adults who live alone and those who live with someone were investigated. The study addressed perceptions of fall prevention education. The method of inquiry was a survey instrument and a small interview of four questions to gain more insight to answers on the survey instrument. The participants of the study were older adults, ages of 65 and older in the community. This population was selected because they are the most likely to fall due to their activity in the community and the home environment as suggested by Lord et al. (2006). The researcher is a registered nurse who has experience in conducting programs on fall prevention among older adults living in the community.

Limitations of the Study

The participants were those adults who attended one of a series of fall prevention seminars at several local healthcare facilities. Subsequently, the study was only generalizable to those particular populations. Bias could be a factor as the researcher is a nurse and heard comments from participants who were interviewed that may not have had favorable mention of how nurses present fall prevention information to the older adult. However, this researcher was able to read and listen to responses with a nonbiased approach from an empathetic point of view. Another concern was the unwillingness of some older adults to participate in the study who might have had different perceptions from those who participated.

Delimitations

The sample size was the number of participants who attended the seminars who met the criteria of age 65 and older, were ambulatory, and willing to participate. This study and the review of literature concentrated on the older adult who is mobile in the community and is without cognitive deficits when the term older adult is used.

Summary

In summary, each year a fall will account for injury and death among 20% to 30% of older adults living in the community. Falls continue to be a problem for this population. This vulnerable population must be able to receive and understand the preventative information provided by healthcare professionals. The perception of the usefulness, adequacy, and positive experience of fall prevention information older adults receive may influence whether the information during the visit was learned, understood, and whether it will be used. Healthcare professionals must be assured that the information older adults receive during an office visit will be used in the home environment. It is through research that answers to these questions are found.

This study attempted to answer questions about the relationship among perceptions of the usefulness, adequacy, and positive experience of fall prevention information among older adults; differences in the perception of those who receive fall prevention information in a positive manner and those who receive fall prevention information in a negative manner; and differences in perceptions of fall prevention information between older adults who live alone and those who live with someone.

Chapter 2: Review of the Literature

The purpose of the literature review was to delineate articles that support the need for the study, thereby adding definition to the study. The literature review for this study was conducted to evaluate the literature on fall prevention among older adults (65 and older) living in the community by searching multiple databases, search engines, and government statistical databases for fall prevention information. The areas of literature included in the study were: (a) older adults as an aging population, (b) working older adults, (c) healthy aging, (d) reasons falls occur among independent older adults, (e) fall prevention strategies, (f) fall prevention information and education available, and (g) a collaborative approach to fall prevention.

Older Adults as an Aging Population

People are living longer in the United States. Persons 65 and older equaled 40.4 million in 2010 and represented 13.1% of the national population. Currently, older adult women outnumber older adult men in the United States. Approximately 29.3% of all older adults who live in their homes reside with a spouse. The older adult population is projected to increase. In the next 7 years, the older adult population will reach 55 million, and in 2030, the older adult population will reach 72.1 million (Administration on Aging, 2011). The older White American population is expected to increase by half, and the Hispanic population is expected to triple. The number of African American, Indian, Eskimo, Asian, Pacific Islander, and Aleut older adults will more than double in the coming decade (Administration on Aging, 2011).

The population in Texas over the age of 60 in 2010 was 3.7 million. In 2013, the ethnic population of older adults living in Texas was 1,842,198 White, 241,822 Black, 589,438 Hispanic, and 130,428 other. By 2040, the ethnic population of older adults living in Texas will be 35% Anglo, 9% Black, 40% Hispanic, and 16% other. In 2010, the expected growth rate of

older adults in Bexar County was 6.4%. Eighty percent of older adults live in urban areas and 20% in rural areas. Persons who are 85 and older are predicted to live well into their 90s (Texas Department of Aging and Disability Services, 2011-2013; Texas Department of State Health Services, 2012; U.S. Department of Health and Human Services, 2013).

Cultural influences. To promote a more realistic approach to compliance, the healthcare professional should consider the individual's culture when recommending fall prevention information (World Health Organization [WHO], 2007). The older population will become more diverse by 2050 (Wilmoth, 2001). The population of future older adults will include more immigrants. Ethnic and cultural differences usually determine where these individuals will live. Many of these older adults with female children will want to live with their daughters, especially those of Hispanic cultures. The reasons for living with family include culture, education, financial status, and physical impairment. Older adult immigrants who are Hispanic or Asian most often live with family. The data regarding immigration of older adults are significant because those living in the community create a need for social services and healthcare considerations, especially if financial resources are limited.

Many immigrants lack education and financial resources to prevent falls. If older adults cannot speak the language of the country, fall prevention information will be less likely to be acted upon in the home. Culture is important in falls prevention because many older adults from different cultures are less inclined to seek assistance because of embarrassment (WHO, 2007; Wilmoth, 2001).

Research supports that immigrants from European cultures tend to live independently or alone. Unmarried European White immigrant men are more likely to live alone and the tendency

to be cut off from fall prevention information is quite possible. They are also more likely to live in nursing homes (Wilmoth, 2001).

The literature supports physician office visits as prime opportunities to provide and assess the needs of the older adult regarding falls in the home (Dibartolo & McCrone, 2003; WHO, 2007). However, there are older adults who have difficulty getting to a physician's office because they live in rural communities. Many of these older adults suffer with chronic illnesses and have the same needs as older adults in the urban community. Healthcare providers need to consider how to administer both physical and home assessments, as well as provide fall prevention information to these older adults. The need for fall prevention information in the rural community is great because these older adults have difficulty with access to care.

Independence. The promotion of balance and strength exercises is recommended in order to reduce falls. Staying mobile prevents falls from reoccurring. The longer functional mobility is intact, independence is maintained (Dibartolo & McCrone, 2003; WHO, 2007). As Americans age, they make up a growing portion of the population living in the community. In the United States, 30 million older adults live alone and because people are living longer, many more will live alone in the future (Portacolone, 2011). The literature shows strong reasons why older adults remain independent. In fact, older adults prefer to live at home and want to remain free to make their own decisions. The sense of self-identity is also important. Being able to stay healthy and care for oneself or for another through maintaining a home is viewed as highly important. For some older adults, their social contacts are important. Some older adults view moving in with the children or into a nursing home as losing their social independence. Many older adults do not want to depend on family or others for fear of being a burden. The most compelling fear older adults have is becoming ill. Illness means having to depend on someone,

whether it be the children or healthcare providers. The quality of life can be severely hindered after a fall (Hobbs & Damon, 1996; Limona, 2009).

Needs. As older adults live longer, a variety of chronic diseases can beset them including diabetes, arthritis, congestive health failure, and dementia. These older adults will need to receive outreach services in their homes as a result of chronic disease progression, which increases as the likelihood of falling. Older adults who fall add to hospital admissions. Since 2007, the majority of emergency room visits related to falls have increased by 10% to 15%. Fatal falls occur among more men than women. However, the injury related to hip fracture occurs more often among women. Preventive measures are needed to limit fall injuries, expected to increase by 100% by the year 2030 (WHO, 2007).

Loneliness. Studies have reported significant relationships between loneliness and physical illness (Theeke & Mallow, 2013). Loneliness among older adults is a common issue among those persons living in the community. Silence in the home can lead to significant loneliness. Studies have shown that when social support is given by family, friends, or confidants, loneliness does not appear to be a factor. Having friends of similar age to share accounts of one's life is associated with the least amount of loneliness. It is essential to stay socially active to combat feelings of loneliness (Drageset, Kirkevold, & Espehaug, 2011). Unfortunately, there are those older adults who have no one to care for them (Mack, Salmoni, Viverais-Dressler, Porter, & Garg, 1997; Portacolone, 2011). Loneliness can result in not wanting to eat correctly and muscle atrophy that can lead to a fall. Loneliness can lead to increased use of medical services.

Caregiver. Many older adults do not have someone to ensure their safety and well-being. Considering who will be the primary caregiver is part of the situation. While older adults will

want to live with someone if possible, the stress that this creates on the caregiver must be part of the equation. Often the caregiver closest to the older adult will incur the majority of the care, whether that is a spouse or children. If the older adult requires more care than the healthier older adult caregiver can provide, there may be little reprieve for the caregiver and stress will ensue. Periods of rest and relief provided by children or others will be needed for the primary caregiver if and when possible. Older adult caregivers must be informed of respite care that is available to give relief for family and friends so that they will not become susceptible to falls themselves (Pinquart & Sorensen, 2011).

Often men believe their caregiver will be their spouse. Women do more often take on the caregiver role than men; but in recent years, according to Roth, Haley, Wadley, Clay, and Howard (2007), many older adults reported living alone without a caregiver. In relation to ethnicity, White older adults are more likely to care for a spouse than African or Hispanic Americans, especially if the older adult already suffers from co-morbidity, such as a stroke. The ability to be a caregiver for a spouse can be limited when the disease process requires more than a lay older adult can manage. If an older adult falls in the home, the older caregiver may not be able to assist in helping the individual to get up from the floor (Roth et al., 2007).

One approach to the prevention of falls includes instruction about holding onto furniture when walking in the home or using assistive devices. The use of a cane or walker may be useful in preventing falls or injuries. The literature is consistent in teaching opportunities regarding fall prevention among older adults who live independently. However, family members and caregivers also need to be instructed on how to prevent falls in the home. Caregivers need to be instructed on the ways falls occur and what can be done for prevention (Blank et al., 2011; Elley

et al., 2008; Hendriks et al., 2008; Karlsson, Vonschewelov, Karlsson, Coster, & Rosengen, 2013).

Informal caregivers play a role in the care of an older adult as physical dependence increases. Studies have shown that the older adult does better when there is an informal caregiver in the home than when they live alone. The idea is to ensure that the older adult maintain mobility and independence (Cho, Kim, & Lee, 2013).

Living alone. Seventy-four percent of women who live alone remain just as healthy as women who live with their adult children. More men than women live with a spouse or significant other and 26% of men live alone. Older adults who isolate themselves have a potential for declining health and falls. Depending on the type of injury, worsening complications could render the person helpless. Those who live alone often depend on external support from home healthcare providers. Societal concerns for older adults living alone relate to poverty and isolation. Some older adults have poor health outcomes, while others die. The mortality rate does not increase if a woman lives alone; but the social isolation does increase, which provides an avenue for a fall to occur. Older adults who live alone do not usually exercise, so their muscles weaken, which predisposes them to falls (Davis et al., 1997; Elliott et al., 2009; Eshbaugh, 2008).

When someone who lives alone falls, it may be difficult to get help. Lack of exercise is prevalent among older adults who live alone because the social reinforcement to do the activity is not present (Theeke & Mallow, 2013). Falls that occur among older adults who live alone have a potential to be very costly, not only for the individual, but for society as a whole (Hobbs & Damon, 1996). Fear of falling is more prevalent among older adult women who live alone and often creates a reduction in activity. Living alone has led to more fall-related injuries,

particularly fractures as compared to adults who live with others (Davis et al., 1997; Elliott et al., 2009; Eshbaugh, 2008).

Cost of falls. The cost of older adults falling causes insurance rates to rise. Injuries that are the result of a fall account for 6% of medical expenses paid by health insurance in 1996 (Hobbs & Damon). In 2000, older adults who had a nonfatal fall equated to a cost of $19 billion. However, by 2020, the cost of fatal falls will account for $54.9 billion (Hobbs & Damon, 1996; Limona, 2009).

Outdoor falls. Older adults who live with someone usually fall outdoors because these older adults are more active and go outside. Tripping on a crack in the sidewalk or over a potted plant in the yard can occur among those who are more mobile. Some neighborhoods are not walking friendly and are in need of sidewalks where older adults can walk without concern of falling (Davis et al., 1997; Elliott et al., 2009; Eshbaugh, 2008).

Self-care neglect. Issues regarding self-care neglect usually occur among older adults above 65 years of age who have the inability to properly care for themselves. Often this problem can lead to physical injury, including fall and psychological injury. Self-care neglect can lead to social isolation, thus creating nutritional deficiencies. Nutritional deficiency can exacerbate chronic illness and lead to a potential for falls if the individual becomes too weak or dizzy. Self-care neglect is about failure to obtain yearly vaccines such as the flu shot or pneumonia vaccine that can further create healthcare issues if combined with a flare up of a long-term illness such as respiratory or vascular disease. Any chronic illness such as asthma, chronic obstructive pulmonary disease, and diabetes or a heart condition can worsen when preventative vaccinations are not obtained by the older adult. The combination of two physical problems can contribute to a fall (Naik et al., 2008).

Working Older Adults

Older adults can be divided into two working cohorts of the U.S. population. The traditionalists are older adults born before 1945 who grew up during the great depression. Traditionalists know World War II as a major event in their childhood. There was a strong sense of family commitment. Returning soldiers from war were celebrated with parades and homecoming festivities. These older adults are conservative in dress and language. The traditionalists possess a strong work ethic, discipline, and stability. The level of commitment makes the traditionalist an invaluable employee. The traditionalist knows how to survive, stay in line, sacrifice, and be considerate of the common good. They have grown up with the radio as a main form of technology (Murphy, 2007).

Many older adults continue to work outside the home and subsequently have helped shape the nation. Older adults are referred to in the literature as the fourth working generation of the U.S. population. The main concept to consider about different generations is that because generations can overlap each other by several years, one generation may have some tendencies found in both groups. Some older adults identify with both generations (Murphy, 2007).

Workplace. Today's economy is causing many older adults to work beyond retirement years. As a result of the economy in America today, some older adults will not be able to remain in retirement and will reenter the workplace. Since Americans are living longer, some older adults want to keep an income and some want to stay occupied by working. The general labor force and retail businesses are seeing an increase in older adult workers. The truck driving industry is also seeing an increase in older workers (Clipper, 2013; Ford & Orel, 2005; Rogers & Wiatrowski, 2005).

Benefits. Older adult workers are dependable; they follow directions well and serve as a good resource of information to other workers. Older workers do not call in sick as much and are timely in reporting to work. Older adults are very good about following policy and keeping to the goals of the organization (Clipper, 2013). A winning situation for older adults and employers exists provided the right situation can be mutually achieved. Older adults have a wealth of life experiences to offer healthcare industries. While healthcare has progressed from new technology, one thing that cannot be easily replaced is experience and human interaction. Returning nurses offer an excellent source of knowledge and experience to the younger bedside nurse. But healthcare is not the only work environment retaining older adult workers (Ford & Orel, 2005). Other industries could benefit from the advice of an older returning workforce (Binder, 2002; Rogers & Wiatrowski, 2005). Older adult employees know what they need to effectively accomplish their jobs (Clipper, 2013).

Safety. Employers stand to benefit by securing the safety of an older adult worker (Clipper, 2013). Employers can gain from mentorship strengths of this older workforce, but they will also need to consider how best to prevent injuries. Staying in the workforce longer increases the older adult's chances of suffering a work-related fall (Clipper, 2013; Ford & Orel, 2005; Rogers & Wiatrowski, 2005). Employers should consider the work environment of the older adult. Carts will be needed to move heavy items. The employer should promote the use of comfortable ergonomic chairs. Mobile devices that make answering the phone manageable for older adults, such as the use of headsets, should be part of the work environment. Computers need to be at appropriate heights, and the screens need to be clear and free from glare. Proper lighting is critical to job accuracy and safety (Ford & Orel, 2005).

One of the ways employers can make the workplace safer is to place the same fall prevention measures into the work environment that older adults should have in their homes. Employers should consider that older adults are susceptible to the same injuries as younger workers (Binder, 2002).

However, older adult workers have specific susceptibility of injuries to the spine, wrists, and ankles related to physiological changes that occur in the body (Binder, 2002; Ford & Orel, 2005; Rogers & Wiatrowski, 2005). Older adult workers are susceptible to back injury partially because of the aging process, but the employer must be cognizant that this is highly individualized (Clipper, 2013; Ford & Orel, 2005). Falls account for the majority of fractures, sprains, and tears among older adults who work as general laborers, healthcare workers, and truck drivers. Fractures of the hip are the type of injury that can lead to permanent disablement of the older adult. Fractures of the hips are the most frequent type of injury as the result of a fall (Binder, 2002; Ford & Orel, 2005; Rogers & Wiatrowski, 2005). Fall prevention information for older adults is conducted with the intent of preventing hip fractures (Crilly, Hillier, Mason, Gutmanis, & Cox, 2010). Salespersons are most prone to falls among older adult workers. Cranial injuries related to falls are the cause of deaths in the work environment. Older adults who fall and hit their head are likely to expire as a result of the hemorrhage that can occur in the brain because capillary fragility increases with age. The remainder of deaths in the work environment related to falls has been the result of other bodily injuries. Internal injuries have the potential to create worsening declination of health to occur among older adults (Binder, 2002; Ford & Orel, 2005; Rogers & Wiatrowski, 2005).

Simple measures employers can take to prevent fall work injuries among older adult workers are to make sure the steps of stairs are visible since older adults have visual problems.

Simply coloring stair steps with different colors allows the older adult to see the stairs more clearly. The employer can make sure hallways and work spaces have good lighting. Giving the older individual shorter shifts and one or two extra breaks can produce a happy, dedicated employee, thus releasing a rich resource to mentor younger workers (Clipper, 2013).

Older adult employees know what they need to effectively accomplish their jobs. Employers who keep older workers healthy and injury free provide their organization with an excellent resource that will keep the company strong (Clipper, 2013; Ford & Orel, 2005).

A fall can occur on the way to the bus stop if sidewalks are uneven or dimly lit on the way to work. Older adults who do not drive and take the bus to work are susceptible to pedestrian accidents. There must be consideration of the accidents that can occur on the way to work (Binder, 2002; Rogers & Wiatrowski, 2005).

Healthy Aging

Since older adults are working longer, staying healthy needs to be part of their daily regimen. Healthy aging is an avenue that prevents falls among older adults living in the community. Healthy aging may take on multiple approaches. Psychological health can add years to an older adult's mental vigor. The ability to reflect on life accomplishments is a positive step to maintaining a clear mind. Older adults who devote time to reminiscing about life memories create a natural avenue in remaining coherent. They also have the ability to share memories of children and great grandchildren with friends. These memories promote a sense of wellness within the older adult and give them a reason to look forward to things. A life's dedication to creating a family adds a sense of fulfillment in the older adult. A healthy mental process keeps the older adult motivated and willing to continue social interaction (Onedera & Stickle, 2008).

Staying healthy is the road to fall prevention. Research suggests that older adults maintain a healthy outlook about life accomplishments. Older adults need to stay in touch with family and friends to encourage a healthy aging process. Older adults need to shun isolating themselves by getting up and going even when reluctant, to build a healthy drive to age well. Participating in the things that make older adults happy is a good approach to staying healthy. Setting a goal for themselves, no matter how small or large, gives the person something to look forward to each day. Magazines are available that offer inspiration and tips about staying motivated to try new things as a person ages. Incentives about reinventing oneself to promote aging in a healthy manner are available so that older adults can enjoy this time in their lives (Onedera & Stickle, 2008; Worthington, 2014).

Staying healthy can be seen as keeping busy and being social. Older adults who continue contact with friends find it leads to companionship and a development of trust (Arcury, Quandt, & Bell, 2001). Some older adults may be able to make a contribution of caring for grandchildren. This activity not only benefits the family, but also helps keep the older adult young in mind and spirit. Staying young in the mind can prevent falls because it keeps the individual alert (Onedera & Stickle, 2008). It is important to keep relationships with friends so that other activities and social opportunities can be explored and enjoyed (Hawley, 2009). Church participation and prayer can also be seen as taking care of self and promoting one's social wellness (Onedera & Stickle, 2008).

The ability to maintain a level of alertness is one of the keys to preventing falls in the home. Keeping an active mind by reading is a good way to promote aging in a healthy manner. The stimulation that reading gives to the mind offers longevity of the thought process. Older adults should keep in mind that aging is not an end point; instead, it is an opportunity to engage

in all the activities that earlier responsibilities prohibited. The drive to stay healthy in mind and spirit can add more years of life to the older adult (Onedera & Stickle, 2008).

A positive attitude goes a long way to healthy aging. Older adults who refuse to let aches and pains keep them down do better at remaining social. Going out into the world can be challenging, but there are many mobile assistive devices at grocery stores and local events that can be used to drive around the facility. Staying in communication with family and friends about recent events helps to keep older adults abreast of changes in their neighborhood, city, and state. The Internet offers the farthest reach for older adults who want to communicate with others. Older adults can check on friends and family through e-mail or social media. They can use the Internet to find activities available for older adults in the community. Fall prevention topics are easily accessible on the Internet. Despite the fact that older adults did not grow up with the Internet, they are very much consumers of the resource. The type of resource chosen for use is not the issue; it is that they feel a sense of independence. The longer a sense of control is part of the older adult's life, the longer the older adult will age in a healthy manner (Naaldenberg, Vaandrager, Koelen, & Leeuwis, 2011).

It has been proven that when older adults refrain from physical activity and exercise training, the risk for falls increases. Regular physical activity and stress reduction are often part of an older adult's long-term plan. When older adults remain physically active, they remain strong and are less susceptible to falls. Older adults who have already fallen and suffered an injury will need physical exercise to regain their mobility. Physical exercise can prevent future falls in the home. Once the decision has been made not to exercise, a chain of events can create a spiraling decline in the health of the older adult. Fear of falling may increase, causing a lack of desire to exercise. The lack of physical exercise will lead to a declination of socialization. The

loss of social contact can lead to depression, impacting mobility to the point of physical devastation (Hawley, 2009).

Some older adults view staying healthy as eating the right foods. Older adults who believe in maintaining and practicing good health maintenance will consume a diet consisting of fruits and vegetables. Others will consume more water and exercise. Having the recommended cancer screenings are part of staying healthy. Many older adults view being healthy through a holistic approach. Maintaining one's cholesterol is often a healthcare recommendation by physicians. Keeping up with yearly influenza vaccinations, as well as getting an annual rectal exam and mammogram are recommended by physicians (Arcury et al., 2001; Worthington, 2014).

Older adults can stay active physically, emotionally, and spiritually, while some older adults may still be working or partially retired. Many cities offer activities such as senior events and sports in which the older adult can participate. Some may enjoy square dancing, playing softball, and basketball. Senior softball leagues are available in some cities for those older adults who want to be on a team. Swimming, golfing, and yoga provide a low impact exercise for older adults. Running is most enjoyable to some older adults as a form of exercise and senior Olympics exist for the very competitive older adults. USA Active Seniors offer a list of activities available in the community ("Texas State Senior Games," 2013; USA Active Seniors, 2011).

The community offers events that provide social experiences for the older adult. Older adults who want to continue with lifelong learning have opportunities for traveling that are also learning events. Some older adults enjoy bird watching and have the opportunity learn about many different species of birds. Experiential learning can lead to different types of experiences such as the opera or photography. Walking and hiking can lead to social networks and a sense of

camaraderie. Belonging to international travel groups can invite many enriched field trips and lectures that can add to continued experiential learning (Drageset et al., 2011; Elderhostel, 2013).

Jarvis (2000) posited that many older adults want to continue learning in later life. Learning keeps the mind active and prevents falls by maintaining the level of alertness in the older adult. Educational institutions have seen a rise in older adult students. Some older adults attend school for occupational reasons, but others attend because it provides a sense of community and opportunity for socialization. Learning becomes fun rather than academically focused for some older adults. Many older adults enjoy what Jarvis (2000) referred to as "third age education" (p. 7). Third age education has been conducted in universities but is also part of the older adult community of Elderhostel. Because there is evidence that learning helps the mind combat cognitive decline, learning for older adults can have multiple benefits.

Reasons Falls Occur Among Independent Older Adults

Falls that occur among older adults are the result of multiple and complex causes. These include behaviors that predispose the individual to a fall. Biological reasons for falls are related to age, gender, and race. Biological reasons combined with chronic illness increase the possibility of falls among older adults. Women tend to require more medication and live alone. Additionally, the muscle mass of women declines more rapidly than men with aging. Men suffer from chronic illnesses as they age, which creates more potential for falls. Social and economic status related to income and education may create a potential for a fall because it may be more difficult to make the necessary adjustments to reduce falls when money or access to fall prevention information is not accessible (WHO, 2007).

Intrinsic factors. Risk factors that contribute to falls that relate to the aging process are known as intrinsic factors. The normal aging process creates problems with an older adult's gait,

visual defects, Parkinson's syndrome, hypotension, spinal and brain disorders, glandular disorders, fractures, chronic disorders, and medications (Thomas et al., 2003). Older adults need to be informed about age-related changes in vision and hearing, including proprioception, which is a response to stimuli that originates from within one's own body depending on its position. Muscles move in response to sensory receptors that have been activated (Harris, Nagy, & Vardaxis, 2009). A gait and balance problem can lead to a fall in the home (Kemle, 2011; Smeeth & Iliffe, 1996).

Vision. Visual defects that develop among older adults may contribute to falls. Visual changes along with hearing deficits place an older adult at risk for falls. Cataracts are an eye condition affecting the lens of the eye. The cloudiness that occurs over the lens if not repaired can lead to inability to see well, thus predisposing the individual to a fall. Glaucoma causes damage to the eye by affecting the optic nerve. This condition can lead to blindness (Hendriks et al., 2008; Harris et al., 2009). Loss of visual acuity and hearing can cause problems with gait and strength. Infections of the ear can cause equilibrium imbalances and lead to a fall (Thomas et al., 2003).

Degenerative retinopathy can occur because the person has an underlying disease such as diabetes. It has been shown to be present in older adults who fall. Improving the vision sensory function can improve the quality of life of many older adults by preventing accidents that lead to falls (Hendriks et al., 2008; Harris et al., 2009).

Some singular approaches to preventing falls can be effective if specific to the individual. For instance, falls declined among older adults who were visually impaired when the intervention was making the home environment safer. However, this approach may not work for

the older adult suffering from dementia (Campbell & Robertson, 2007; Hallrup, Albertsson, Tops, Dahlberg, & Grahn, 2009).

Balance. Many falls are associated with loss of balance (Elley et al., 2008). A simple trip or slip while walking can lead to a fall. Addressing activities of daily living such as balance and walking are important since these activities have contributed to the reduction of falls. Many other adults find it difficult to walk in the home because their bones become stiff from inactivity (Smeeth & Iliffe, 1996; Texas A&M System, 2010).

Older adults who live in the community may have any number of disorders that can lead to a fall. Sometimes disease processes cause balance problems later in life. Staying mobile can become challenging. As each decade passes, fall rates accelerate among older adults (National Safety Council, 2015). The instability of standing and hip weakness contributes to the risk of a fall (Frick, Kung, Parrish, & Narrett, 2010). Immobility associated with aging creates more problems for the older adult, and while assistive devices are useful, the apparatus must be properly fitted. Older adults need training about mobile devices to ensure safe use. Healthcare professionals need to make sure training of accessory equipment is accomplished by physical therapists so that falls do not occur (Kemle, 2011; Moon, 2012).

Strengthening exercise programs are necessary to promote longer mobility. Surprisingly, older adults who are mobile may need an individualized applicable treatment plan inclusive of physical and occupational experts. Older adults are at most risk for falling because of the amount of everyday activity they accomplish. Encouraging exercise can strengthen weak muscles and promote mobility (Elley et al., 2008).

Practical approaches to care for older adults may involve tests to determine balance and stability. The Timed Up and Go Test can identify balance problems (Podsiadlo & Richardson,

1991). The Timed Up and Go Test involves asking the older adult to rise up from a chair without the use of his or her arms. The older adult is expected to walk a few steps and turn around. The older adult will walk back to the chair to sit down without using his or her arms. If the older adult can accomplish the task, then an exercise program can be implemented to promote balance and strength (Kemle, 2011; Moon, 2012). The individual person's medical condition related to normal aging or disease process can account for most of the intrinsic factors leading to a fall. Conversely, disease-related falls are the smallest contributor to falls (Thomas et al., 2003; Harris et al., 2009).

Parkinson's syndrome. Parkinson's syndrome is a disease that attacks the nervous system and can create unsteady mobility from tremors associated with the disease (Mayo Clinic Staff, 2014). As the disease progresses, the individual will have difficulty walking (Harris et al., 2009). The simple task of getting out of a chair will be slow. The joints and muscles become stiff and create problems with movement of a person's arms and legs (Hosseini & Hosseini, 2008). The accumulations of symptoms lead to a potential for falling. The medications associated with Parkinson's disease and other health conditions create an increased possibility of falling (Thomas et al., 2003).

Hypotension. Hypotensive states can lead to a fall because the older adult will tend to lose balance because of lack of oxygen to the tissues. Acute illnesses such as the flu or pneumonia have led to falls in older adults as these illnesses leave the person feeling weak. Fever from pneumonia and urinary tract infections can create equilibrium changes because of loss of fluid and electrolytes leading to the inability to stand appropriately (Hosseini & Hosseini, 2008; Thomas et al., 2003; Harris et al., 2009). Blood pressure instability can decrease blood to the head and cause balance issues (Harris et al., 2009).

Sensory receptors are found in the inner ear, muscles, tendons, and joints that perceive movement. Receptors that do not function appropriately can lead to difficulty with gait (Crilly et al., 2010; Thomas et al., 2003).

Spinal and brain disorders. Disorders of the spine and brainstem that include the cerebellum can add difficulty to remaining balance. Figure 2 shows a picture of the cerebellum (Wikipedia, 2013).

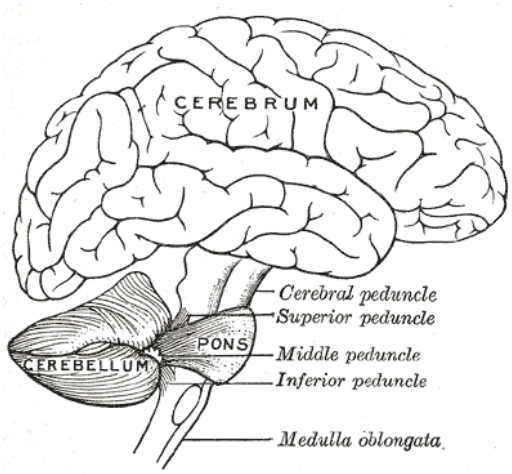

Figure 2. Cerebellum. Copyright has expired. This applies worldwide.

A disorder of the basal ganglia can add to difficulty with gait. The basal ganglia are located in the brain. Disorders of the frontal cortex can cause the most influential gait disturbance. The frontal cortex is the part of the brain that is responsible for movement (Harris et al., 2009). Disorders of the central nervous system can cause issues with gait. Older adults who suffer from dementia or other mental status impairments may suffer gait problems. Disorders of the joints, muscles, and bones will cause balance problems. These disorders include not only arthritis, but disorders that affect stroke victims (Lewis, Heitkemper, Dirksen, Bucher, & O'Brien, 2007; Thomas et al., 2003).

Stroke victims are prone to weakness on one or both sides of the body so balance, motor movements, and coordination will be an issue for this older adult (Lewis et al., 2007). Musculoskeletal disorders that affect the hip, legs, feet, and ankles will lead to problems with gait or balance (Harris et al., 2009; Thomas et al., 2003).

Glandular disorders. Disorders of the thyroid gland can cause balance issues if the heart rate fluctuates too rapidly or slowly in rate (Fuller, 2000; Oliver, 2007; Thomas et al., 2003). With aging, the bones become less pliable and more brittle because of the lack of absorption of calcium (Harris et al., 2009). When an older adult falls, the result can be devastating in terms of loss of mobility (Crilly et al., 2010). The origin of falls has multifactoral origins consisting of the individual, mobility, and the environment (Hendriks et al., 2008; Harris et al., 2009).

Fractures. Fractures involving the hip caused by osteoporosis contribute to falls (Crilly et al., 2010). Osteoporosis is a deterioration of bone that slows with exercise (CDC, 2008c; Rose, 2008).

Disorders. Disorders such anemia can lead to weakness and cause a fall to occur. Anemia causes the hemoglobin and hematocrit to be too low and results in dizziness, which can lead to a fall (Harris et al., 2009). Disturbances in electrolytes in the body can create confusion states for the individual. When a person's blood sugar or electrolytes are too low or too high, dizziness or loss of consciousness can occur causing the person to fall (Fuller, 2000; Oliver, 2007; Thomas et al., 2003).

Chronic disorders. Chronic disorders such as congestive heart failure and diabetes contribute to dizziness. Older adults in need of pacemakers are at risk for falls (Fuller, 2000; Karlsson et al., 2013; Thomas et al., 2003).

Chronic illness develops when sedentary lifestyles cause the accumulation of adipose tissue around the abdomen. The increase in weight gain can be a precursor to diabetes (Harris et al., 2009). Tobacco use contributes to respiratory problems leading to chronic illness (Theeke & Mallow, 2013).

Medications. Medications are a very important contributor to falls. Medications that have sedative, antipsychotic, and antidepressant effects are linked to falls in the older adult. Medications increase the risk for falls when they have side effects that lower blood pressure, cause drowsiness or dizziness, and create changes in a person's equilibrium. Medications that are intended to promote fluid loss, such as diuretics, can cause dizziness if too much fluid is abruptly lost. Medications that are used for pain or for anxiety have a sedative effect and can cause a fall to occur in an older adult (Karlsson et al., 2013; Thomas et al., 2003).

Consumption of multiple medications for the heart or blood pressure can lead to dizziness and create a fall situation. Simply addressing the effects of medications that older adults may be consuming could provide some insight to the need for caution upon rising up from a sitting or prone position (French et al., 2007; Hendriks et al., 2008; Roth et al., 2007).

The older adult must be knowledgeable of fall risk potentials in the home including the medication cabinet. Often over-the-counter medications do not mix well with prescribed medication. So, older adults must understand the risks involved in combining over-the-counter medications with prescription drugs. Falls among older adults have been shown to reduce when antianxiety medication are reduced (Costello & Edelstein, 2008; Maejima et al., 2009; Mitchell, 2011).

Nutrition. Older adults who have difficulty maintaining a nutritional diet experience bone loss quickly. Physiologically older adults are already losing calcium on a daily basis

through the natural aging process. Many older adults who live alone have been found to reduce nutrient intake than those who dine with others. The reasons can range from isolation to weight control. Many older adults have low consumption of milk (Vind, Anderson, Pederson, Jørgensen, & Schwarz, 2009).

Extrinsic factors. The environment an older adult lives in can have a significant risk for a fall to occur especially when combined with biological and social factors (WHO, 2007). Most often, it is the everyday hazards in the home that cause older adults to fall (Hosseini & Hosseini, 2008). Extrinsic risk factors relate to the older adult's residential environment that can lead to falls including the older adult's home or community environment. Poor lighting in a hall or stairway can create a dangerous situation for someone who has difficulty with vision. Pets can run across the path of older adults causing them to fall. Plants can create tripping hazards. A loose carpet can cause someone to lose balance and fall (Thomas et al., 2003). Older adults who are active and walk in the outdoors may suffer a fall. Persons who are unable to maintain balance are at increased risk for falls, so having hazards in the home will escalate the possibility of a fall (Karlsson et al., 2013).

Activity seems to play a role in whether an older adult falls because the fall is usually due to stumbling or tripping over an object (Karlsson et al., 2013). Women are more prone to falls then men. Walking and moving from a bed to a chair can contribute to a fall. If a person is tired, navigating up and down stairs can lead to a fall. The majority of falls have been found to occur in the kitchen where objects are out of reach (Davis et al., 1997). Falls occur in the living room when there is clutter or furniture is occluding the path of walking. Falls occur in the bedroom when there is insufficient lighting to orientate the older adult at night or when objects are not within reach (Elliott et al., 2009).

Older adults who are mobile are most likely to sustain a fall. Research shows that active older adults are more likely to take risks in their environment. These risks include changing light bulbs on unsafe support devices and non-adherence to environmental hazards in the home (Lord et al., 2006).

An increased sense of security can add to a desire to go outdoors and move about the community. However, the research points to a greater potential for falls to occur outdoors especially for the active healthier older adult (Kelsey et al., 2010).

Fall Prevention Strategies

Falls in the home environment can be prevented. Older adults living in their home need to be aware of what can be done to prevent falls. While residential modifications are good fall interventions, modifications alone will not prevent falls (Lord et al., 2006). There are a number of ways to present fall prevention information so that older adults will want to adopt the instruction into their homes. Older adults can be presented with recommendations that promote group exercise (WHO, 2007).

Exercise. Many topics are available to choose from in fall prevention regarding exercise. Tai Chi has been known to enhance balance (CDC, 2008c). This weight bearing exercise is known to promote well-being and health among older adults. Tai Chi is an ancient form of martial arts and when modified for seniors, it allows for slow movements that help the older adult to gain strength and balance (CDC, 2008c; Rose, 2008).

An assessment of bone strength such as the Otago exercise program can be utilized for fall prevention (Cambell & Robertson, 2007). The Otago exercise program is delivered by a physical therapist over a period of time after which older adults are expected to continue learned exercises and record their progress. Family physicians must be involved for the Otago exercise

program to work. Research indicates that this method of family physician involvement is ideal for recruiting older adults to the program. Evidence-based practice supports the need for physician involvement in fall prevention. Exercise in itself is a method of maintaining the body systems in balance. Exercise that is available to the older adult will promote longevity of mobility and decrease the chance of falls. This type of information can be made available to older adults through healthcare providers. A wealth of information about fall prevention is available on the CDC website. The main concept is that fall prevention does not rest upon one intervention; it takes multiple approaches to prevent falls. While these approaches have been discussed, the effects of how exercise can enhance the other approaches need explanation. When older adults exercise, their chronic diseases tend to regulate, including non-insulin dependent diabetes and heart disease (CDC, 2008c; Rose, 2008). Exercise used to promote the daily living activity of older adults has shown to reduce falls. Exercise conducted in a group setting lessens falls and also promotes safety because others are around to assist if an accident occurs during the exercise. Some exercise programs use stationary bicycling. Indoor ambulation is another choice of getting walking accomplished. Indoor walking in the mall provides a cool temperature in the summer and warmth in the winter. A small walk after evening meals promotes mobility and motility of the adult bladder and bowel (CDC, 2008c; Thomas et al., 2003).

Physical exercise at home will strengthen the older adults so that ambulation is not so difficult. Psychosocial assessment can be done to promote more social involvement with other seniors so as to prevent loneliness. These techniques may lead to taking less medication (Sjösten et al., 2007).

Sedentary life can lead to a possible restriction of activity. Older adults who sustain an injury need exercise to promote confidence in walking. Balance strengthening and stationary

standing exercises with the use of a tether harness have proven to increase functional movement, adding to a sense of security (Jacobson, Thompson, Wallace, Brown, & Rial, 2011; Kelsey et al., 2010; Yardley & Todd, 2007).

Dancing is also recommended as a form of exercise. Dancing provides for more than just exercise; it gives an opportunity for socialization. All of these forms of exercise are good for the cardiovascular health of the older adult and strengthen the extremities; therefore, reducing the risk of falls in the older adult (CDC, 2008c; Thomas et al., 2003).

Long-term effects of exercise have been studied to determine if balance can reduce falls among the older adults living in the community. Physical activity aimed at promoting balance and strength has a healthy effect at keeping the older adult mobile. Muscle stretching, dancing, and Tai Chi were also found to reduce falls in older adults (Costello & Edelstein, 2008; Frick et al., 2010; Maejima et al., 2009; Mitchell, 2011).

Fall alarms. There is a variety of equipment options that can be used by the older adult to prevent a fall. One must consider that many fall alarm monitors for the home are associated with monthly fees in order to have the system. The majority of fall alarms can provide notification to an emergency response system for an older adult who lives alone. It was noted that some alarm systems offer free installation, but are costly in monthly fees, especially those available to healthcare organizations. Many media ads are posted on the television about fall alarm systems, as healthcare providers must be available to guide the older adult consumer as to the best intervention for use if asked (Fall Prevention Alarms, 2013; Philips Lifeline, 2013).

Floor mats. Accidental falls account for many unintentional injuries. Bedside floor mats are available for home use. This is a thick non-slip mat that is placed on the floor next to the bed

to absorb the impact of a fall (CDC, 2010; National Institute of Health, 2015; Scott, Bawa, Feldman, Sims-Gould, Leung, & Tan, 2008; WHO, 2007).

Bathroom. Areas of the bathroom and bedroom that create fall hazards are mapped out in the fall prevention checklist. The fall prevention checklist gives tips on footwear that provides good traction. Night lights are recommended so that hallways are not dark at night. Stepping stools if used at all should have handrails (U.S. Department of Health & Human Services; Centers for Disease Control (CDC); National Center for Injury Prevention and Control; Division of Unintentional Injury Prevention , 2005; Karlsson et al., 2013).

Lighting. Good lighting throughout the home is essential to an older adult, especially when there are visual changes occurring. It is highly stressed that an arrangement of kitchen items in cabinets be within reach in lower cabinets. Stepping stools if used at all should have handrails (U.S. Department of Health & Human Services; Centers for Disease Control (CDC); National Center for Injury Prevention and Control; Division of Unintentional Injury Prevention, 2005; Karlsson et al., 2013).

Outdoors. When walking around the outside of the home, older adults need to take special precautions, particularly during severe weather (CDC, 2005; Karlsson et al., 2013). Participation in social events along with improvements in balance and gait of the older adult can produce more confidence during walking (Al-Aama, 2011).

Fall Prevention Information and Education Available

Older adults are given the proper guidance about fall prevention when visiting a healthcare provider. The information learned during the office visit may be the very factor that prevents future falls among older adults (Elley et al., 2008).

Fall prevention information is available to older adults. Fall prevention information available on the Internet is plentiful. Fall prevention information is available on many websites offering quality approaches to preventing falls in the home. Some websites offer fall prevention programs for the entire community. However, there are concerns for those individuals who do not have access to the Internet. The lack of a computer leaves the older adult to be dependent on the healthcare community for fall prevention information. For those older adults who visit a healthcare professional fall prevention facility, information should be readily available for distribution (National Institute of Health, 2015; WHO, 2007).

Wong, Woo, Cheung, and Yeung (2010) studied the participation in fall prevention programs by older adults. It was determined that some older adults in communities did not join fall prevention programs. Many older adults were in need of assistance but could not attend meetings.

Mitchell and Lawes (2008) promoted fall prevention education by healthcare practitioners in order to meet the needs of older adult clients. Assessment and prevention skills needed to make referrals for anyone who is a risk for falls is taught to healthcare practitioners so that intervention and treatment can be conducted. The education given by healthcare practitioners is an important part of reducing falls and preventing injury among older adults. Comprehensive health assessment with multiple intervention strategies have been reported as being effective in fall prevention in older adults. Education is an intervention introduced in fall prevention programs. Education about prevention of falls in the home can help provide for a healthier living situation for the older adult. Educating older adults about falls can decrease the potential for a fall (Costello & Edelstein, 2008; French et al., 2007; Huang & Acton, 2004).

Websites. The National Institute of Health (2015) and the World Health Organization (2007) provide a wide variety of fall prevention information on their websites that is available to older adults instructing them about healthy eating habits and the advantages of exercise as a person ages. Many of the materials are available in free ready-to-read, printable handouts. Managing balance problems and preventing falls are among the choices of other topics for older adults and are available for downloading. For older adults who have trouble with reading, there are videos that can be downloaded. Topics about fall prevention are available in closed caption for those who have hearing impairment. Videos are available that recommend exercise to promote balance and strength. Exercise is recommended to prevent falls. There is also a variety of topics for viewing besides fall prevention that are available on the videos within the National Institute of Health (National Institute on Aging, 2013).

Printed materials. Fall prevention guidelines are available for use with categories that specifically target the older adult. Fall prevention information is available in the form of pamphlets. These pamphlets discuss reasons falls occur in layman terms. Health information is available on falls and fractures. One page informational sheets are available to the public to print up that give advice on how to make stairs safe. Information is available about how to make bathrooms, bedrooms, and living rooms safe (CDC, 2010; National Institute of Health, 2015; Scott et al., 2008;WHO, 2007).

Some older women receive health information in terminology that is difficult to understand (Campbell & Robertson, 2007). Sometimes the information may be too technical for the reader to follow. Healthcare information should be in the language that is needed by the older adult. The information provided by healthcare professionals on promoting exercise needs to be fun and presented in an interesting manner. How a women views her changing body will have an

effect on the reception and perception of information provided by healthcare professionals. Healthcare professionals must be careful not to suggest too many changes in the home at once as the older adult may not be able to accept all those changes at once. There are fall prevention checklists for seniors to assess the home for fall risks. These checklists can be used by the older adult and/or by the care provider (Campbell & Robertson, 2007; Hallrup et al., 2009).

Collaborative Approach to Fall Prevention

The approach to care of an older adult can be multifaceted because there are more considerations to incorporate than just fall prevention (Pinquart & Sorensen, 2011). Merrett, Thomas, Stephens, Moghabghab, and Gruneir (2011) examined a collaborative approach related to fall prevention. Healthcare professionals need to communicate with each other when conducting fall prevention assessments among older adults living in the community. Multiple healthcare professionals can assist with screening and intervention (Campbell & Robertson, 2007). Recommendations include identifying who in the healthcare practice can perform specific areas of the screening and assessment (Al-Aama, 2011; Fuller, 2000). When other disciplines are involved in fall prevention, recommendations from the multidisciplinary team are more comprehensive for the older adult (Al-Aama, 2011; CDC, 2008b; Fuller, 2000).

Sjösten et al. (2007) suggested a multifactoral fall prevention program beginning with assessment guidelines to give the healthcare worker a view of the type of approach needed with the older adult in fall prevention. Guidance is provided when treatment is prescribed. Older adults need guidance in how to prepare their homes against hazards that lead to falls.

Many researchers (Kemle, 2011; Moon, 2012; Smeeth & Iliffe, 1996) encourage healthcare professionals to use multifactoral approaches in fall prevention among older adults. Multifactoral programs provide excellent approaches to fall prevention. These multifactoral

approaches include adjusting the home environment to assessing for fall hazards in the home and the assessment of medications taken by older adults that cause dizziness and drowsiness (Shin, Kang, Hwang, & Jung, 2009). The idea of implementing an individual home fall prevention program that is complemented with communal exercise therapy and monitoring of the events that lead to injury, is worth considering when planning the care of older adults (Blank et al., 2011).

A contradiction in the literature found by Vind et al. (2009) was made about multifactoral fall programs when researchers investigated types of programs that could prevent future falls in the older adult population, although they cite much evidence of the effectiveness of multifactoral approaches in fall prevention among older adults. The researchers concluded that multifactoral interventions in the prevention of falls did not prevent further falls (Vind et al., 2009).

The Roles of Physicians and Other Healthcare Professionals in Fall Prevention

Physicians' role. Finding the best approach to giving fall prevention information is important in creating behavioral change. Primary healthcare providers who discuss fall prevention information in the office can learn what older adults feel is important to them. Older adults come to the physician's office with differing ideas regarding fall prevention in terms of what is important to them. When physicians are involved in the actual fall prevention program, the recommendations are more likely to be followed by the older adult (Al-Aama, 2011). The physical involvement of the primary physician in the standard overview of assessment can be effective (Al-Aama, 2011). Older adults respect their physicians and are more willing to do what is recommended by their physician.

Stephenson (2009) recommends integrating fall prevention into professional practice. Physicians are educated about the epidemiology of falls and the consequences of falls in the older population. Recommendations for screening processes are stressed, but what is lacking is

the application of physician involvement in the process of fall prevention programs. The literature focuses on assessment of falls as an avenue for intervention. More current research showed the need for fall clinics that address prevention (Al-Aama, 2011; Campbell & Robertson, 2007; Stephenson, 2009; Fuller, 2000).

Al-Aama (2011) posited the identification of at-risk persons is vital in application of fall prevention measures. Family physicians play a major role in screening patients for falls. Healthcare professionals need to be part of the referral process in facilitating participation in fall prevention programs. Routine questioning about whether falls have occurred when older adults visit their primary physician is recommended.

Physicians have a role in assessing patients who have a potential to fall or those older adults who have fallen. The physician is the center of care for the patient. Older adults must be educated about the issues that lead to falls in the home. When physicians take the time to assess older adults regarding the reasons falls have occurred in the home, an increased meticulousness occurs in the plan of care. The care of the patient is enhanced with a level of professionalism and diligence. The physician is able to retain the attention of older adults because of the level of confidence patients have in their primary care provider. The health history the physician is able to obtain from the patient provides a clearer picture for the approach of care of the older adult who has fallen (Fuller, 2000).

Primary care practitioners can identify risk factors for those persons at greater risk, especially those who are advanced in age. The literature strongly recommends general practitioners as the primary healthcare professional who can influence the behavior of older adults in compliance with fall prevention because they are widely respected and accomplished (Elley et al., 2008).

Providing fall prevention information in the office of the primary healthcare provider needs to be seen as something that is innovative and exciting. When older adults perceive fall prevention information as a dynamic process, there is less stigma of associating falls as a part of aging (WHO, 2007).

Other healthcare providers. The use of multiple healthcare professionals, such as nurses and physical/occupational therapists, can help identify and assist with screening and intervention of older adults at risk for falling (Campbell & Robertson, 2007; Fuller, 2000). More current research showed the need for fall clinics that address prevention (Stephenson, 2009). Occupational therapists can provide training for those older adults who are more zealous in daily activity (Lord et al., 2006). The fall prevention intervention that makes some difference is mobility training with an occupational therapist along with advice on footwear (Lord et al., 2006).

Many older adults who work with nutritionist therapists report consuming healthy foods rich in needed vitamins. These older adults also disclose staying active in the community by checking their health through blood pressure, blood sugar, and body weight management (Karlsson et al., 2013; Thomas et al., 2003).

Harling and Simpson (2008) and Hwang (2012) endorsed occupational therapists as having an opportunity to afford assistance to older adults regarding fall prevention since these healthcare professionals promote healthy lifestyles. Occupational therapists can educate about health risks that place the older adult at risk. If an older adult visits the healthcare provider and little-to-no intervention is made to prevent falls in the home, then a fall may result from a missed opportunity on the part of the healthcare provider (Karlsson et al., 2013; Thomas et al., 2003).

The future of an increasing population weighs concern as to whether there will be enough healthcare services to provide for the needs of those living in the community, considering the approach to care for older adults is essentially preventing falls. Often education and finance, as well the perception of need are considerations.

While fall prevention programs are available, adherence to recommended regimens has been challenging for many older adults. The best opportunity to educate older adults is when they visit a healthcare professional (Blank et al., 2011). Opportunity exists to educate the older adult about fall prevention, but more importantly ways to reduce falls can be implemented (Shin et al., 2009).

Fracture nurse coordinators offer community fall prevention strategies for preventing falls among older adults living in the community. Thorough identification of multiple risk factors related to health can be utilized for fall prevention. Healthcare professionals have the ability to promote interest and continuance of fall prevention activities among older adults. Older adults who are motivated by healthcare professionals are more likely to accept and continue the recommendations set forth by the physician.

Summary

In summary, the mysteries of whether older adults understand and integrate recommendations about fall prevention information in the home can be dependent upon personal views and gender of the older adult (WHO, 2007; Yardley et al., 2006). Varied reasons are given for adherence and non-adherence to fall prevention information. The literature suggests a strong advocacy for healthcare professionals to be aware of fall interventions among older adults that promote balance and strength and to become part of the provision of fall prevention information among older adults living in the community (WHO, 2007; Yardley et al., 2006).

Older adults who visit healthcare providers are at risk for falling even with all the fall prevention information and research available. Falls continue to plague the older adult population to epidemic proportion. Healthcare professionals must continue to prevent falls among older adults living in the community. Even with all the technology in healthcare, falls still threaten the older adult population. Healthcare professionals need to be at the forefront of fall assessment, planning, and recommendations for the older adults. When older adults come to see the physician during the year, office visits provide an opportunity to educate older adults before they go back into the community. We all will become older adults one day. Hence, attempting to understand how older adults perceive, understand, and use fall prevention information can be a way to helping ourselves in the future in the prevention of falls (Blank et al., 2011).

Since the population is living beyond previous decades as a result of modern medicine and technology, older adults will be faced with multiple complexities of achieving a healthy aging process. Healthcare professionals and physicians need to be aware of the interpretation of the instructional information provided to older adults.

Understanding the older adult as an aging population can give perspective on how fast this population is increasing in the near future. With an increasing population, comes more potential for falls and healthcare professionals need to be aware of this growing concern.

Chapter 3: Methodology

The purpose of this mixed methods explanatory research study was to investigate the perceptions of older adults regarding the usefulness, adequacy, and positive receipt of fall prevention information given by healthcare professionals. This study had both a quantitative with qualitative aspect approach. The research questions for this study were:

1. What is the relationship among perceptions of usefulness, adequacy, and positive receipt of fall prevention information among older adults?
2. Is there a difference in the perceptions of usefulness and adequacy among older adults who receive fall information in a positive manner and those who receive fall prevention information in a negative manner?
3. Is there a difference in the perceptions of useful and adequacy of fall prevention information between older adults who live alone and those who live with someone?
4. What are older adults' perceptions of needs and experiences of fall prevention education provided by healthcare providers?

Research Design

The research design for this study was a mixed method explanatory design. Limited qualitative data were collected after the quantitative analysis to further explain the quantitative results (Creswell, 2008). Creswell (2008) suggested that survey designs allow the researcher to conduct and extract information from a portion of the population. This sample of information can reflect how the entire population feels about a particular topic.

Setting for the Study

The study was conducted in several southern healthcare facilities over multiple presentations where older adults came to receive fall prevention education. These facilities

included hospitals and senior wellness centers. The data collection was conducted over a timeframe of 9 months before the fall prevention presentations. Each survey administration took approximately 45 minutes.

Population and Sample

The target population for this study was ambulatory older adults age 65 and above who came to hear a seminar on fall prevention. A convenience sample was used for the study. The criteria for selecting this sample included ambulatory older adults ages of 65 and older who had no cognitive physical limitations and attended the fall prevention seminars. The participants met the criteria for selection if they were alert, oriented, and able to participate in the survey. This age group was considered the younger older adult and more mobile, thus more likely to fall (Lord et al., 2006).

The participant pool was 315. The sample size achieved was 271 older adults, achieving a confidence level of 95% with a margin of error of 4 (Creswell, 2008; *Survey System*, 2012). With the population and medium effect sizes, the power of a *t*-test was predicted to be over 82% (Faul, Erdfelder, Lang, & Buchner, 2007).

Protection of Human Subjects and Ethical Considerations

Older adults are a sensitive population who are able to function and live alone. For the protection of human rights and ethical considerations, prior to beginning the study, the researcher received approval from the Institutional Review Board (IRB) of the University of the Incarnate Word (Appendix A). The healthcare facilities sponsoring the series of seminars did not profit from the research and were willing to accept the study being conducted. See Appendix B for the letter asking for approval to conduct the study in the healthcare facilities. The study did not begin until such approval was obtained from the healthcare facilities management (Creswell, 2009).

Consent Methods

Each participant signed a consent that stated that participation was strictly confidential (Appendix C). A Spanish version of the consent was available for Spanish-speaking study participants (Appendix D). Bilingual volunteers were available during the consent to assist those participants who spoke Spanish or to provide assistance as requested either to complete the consent or answer questions in Spanish.

Participants were informed that their decision to participate or not participate in the study had no effect on their relationship to the program that brought them to the healthcare facility. Complete anonymity was part of the study. Names did not appear in any part of the data collected and the participant was not identifiable by the demographic information on the survey. In order to conduct the personal interview, a third page was added to the consent that asked for participation in a personal interview. If participants were interested, they were asked to place their names and phone numbers on the third page so that this researcher could contact them. The same consent form used for the survey part of the study was also utilized for the interview part of the study (Appendix C and D).The personal interview portion of the study was recorded and was only accessible to this researcher. After this study was completed, the recorded interviews were destroyed. If this study is published, only survey data obtained from the group of participants will be used. There was no physical or monetary expense associated with this study. There were no areas of sensitivity that would cause stress to the participant. The report of the personal interview used pseudonyms to protect the identity of the participant. There were no physical or emotional risks for the participants of this study. Of course, the participant was free to stop the study at any time. Those older adults who were interested in the study were given a letter of permission explaining the study, the risks involved, and assurance of anonymity. The English

version of the letter is in Appendix E. The Spanish version of the letter available to participants is in Appendix F. Bilingual volunteers were available during the administration of the letter to assist those participants who spoke Spanish or to provide assistance as requested either to read or answer questions in Spanish.

Once the IRB had been approved and permission had been given by the healthcare facilities, the participants were asked to sign a consent form to participate (Appendix C and D). The consent to the study contained the purpose of the study, researcher identification, sponsoring institution, participant selection, participation benefits, participant involvement, risks, guarantee of confidentiality, withdraw at will, and persons to contact if questions rise after the study. The participants were instructed that they could withdraw from the study at any time. The participants were informed that all information obtained during the study would remain confidential (Creswell, 2008, 2009).

Research Instruments

The instrument that was used in the study was a survey of closed-ended questions relating to their perceptions of usefulness, adequacy, and positive receipt of fall prevention information provided by healthcare workers during physician office visits. The survey design chosen for this study was selected because it allowed for the study of the perceptions of older adults about fall prevention information in a convenient and economical method of data collection. The instrument was a researcher designed 5-point Likert scale (Appendix G). A Spanish version of the modified survey instrument was available for Spanish speaking study participants (Appendix H). Bilingual volunteers were available during the survey to assist those participants who spoke Spanish or to provide assistance as requested either to complete the questionnaire or answer questions in Spanish.

The questions were designed to elicit older adult perceptions about the usefulness, adequacy, and positive receipt of fall prevention information obtained from physicians, nurses, physical therapists, and occupational therapists. The questionnaire was intended to extract information about the experience the older adult received when fall prevention information was provided by healthcare professionals. Finally, the questionnaire was designed to obtain information about how and whether fall prevention information was given to an older adult.

A pilot was conducted prior to using the instruments to test the readability of the survey. The Spanish survey and instrument were verified for translation through Google Translate. During the pilot session, Spanish-speaking participants were asked to give feedback regarding any words that were not properly translated for this region of the country. Only one Spanish-speaking participant asked for changes to the survey instrument, Part I, Question 7, for readability (Appendix H). Any questions that were confusing in English and Spanish were revised (Appendices G & H).

Data Collection Procedures

The survey instrument was given before the falls prevention presentation. Each older adult who met the criteria were asked to participate in the study on a voluntary basis. The survey instrument consisted of a Part I demographics section and Part II was a 25-item 5-point Likert scale to include categories of 0 = *not-applicable*, 1= *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*. See Appendices G and H.

Personal Interviews

This study contained personal interviews to collect the qualitative responses of participants. I asked five older adults aged 65 and older to participate in face-to-face interviews. The qualitative interview allowed the participants to describe their perception of the experience

of the fall prevention education given by healthcare professionals. How older adults attribute the experience of fall prevention education can be found through this basic interpretive research (Merriam, 2002). The personal interview questions were four open-ended questions based on the outcomes of the quantitative results. The personal interview questions were available in Spanish for Spanish-speaking participants; however, all the participants in the interviews were English speaking.

The pace of the personal interview was according to the needs of the older adult (Creswell, 2008). The research was conducted in a private ethical manner and all information obtained in the second part of the study remained confidential. The interviews were audio recorded for accuracy and digital transcription upon completion of the quantitative analysis. The participants were thanked for participating in the study, and the researcher instructed the participants that they would be called. The participants who chose to participate in the personal interview were contacted at a later date for a follow-up interview (Creswell, 2008).

Data Analysis Procedures

The statistical methodology included correlational analysis of the independent and dependent variables. The primary variables included perceptions of usefulness, adequacy, and positive receipt of fall prevention information among older adults. The statistical analysis included the use of IBM-Statistical Package for the Social Sciences, version 20, and the personal interview data were analyzed for recurring themes as suggested by Holiday (2007).

The data were cleaned and assumptions were addressed. Question 1 in the study required correlational analysis. Correlational analysis tests are used to determine relationships among two scale and one dichotomous variable (Cronk, 2012; Tabachnick & Fidell, 2007). The analysis of questions 2 through 3 in the study required Mann-Whitney *U.* The Mann-Whitney *U* determined

the reliability of mean group differences and was used for the significance of group differences (Tabachnick & Fidell, 2007).

The qualitative data were analyzed from raw data to organization of transcribed interviews. All the data were read to obtain an idea of the general meaning of the participants. The information was coded and labeled in an effort to generate themes for analysis. The themes were explained in a narrative format. A final meaning of the data was discussed (Creswell, 2009).

The qualitative aspects of the study were triangulated using two sets of open-ended questions and quantitative data to determine the validity. The data were analyzed to establish a series of converging or perspective themes to further support the quantitative results of the study. Member checking was conducted to establish if the finished analysis was what the participant meant to convey. Narrative descriptions were used to provide a realistic perspective of the themes (Creswell, 2009).

Summary

In summary, Chapter 3 attempted to describe the plan for how the research study was conducted. Since this study involved human subjects, official permission was obtained from the IRB at the University of the Incarnate Word and from the healthcare facilities where the study took place. The population consisted of those persons who attended fall prevention seminars offered by this researcher. The sample consisted of 271 participants among older adults living in the community who attended a fall prevention seminars. The instruments were a survey and five personal interview questions from five participants who did attend the seminars.

Chapter 4: Quantitative Results

Chapter 4 describes the results of the statistical analyses of data and research questions investigated. It includes a pilot study that was conducted to determine readability of the instrument. The pilot study was conducted February 12, 2014, at local health centers where older adults meet each day, similar to the health centers in the full study. The pilot study consisted of 30 participants. The pilot study participants were male (33%) and female (66%). The age range of the pilot study participants were equivalent to the current study, from 65 and older. The ethnicity of the pilot study participants were Hispanic, Caucasian, Black, Asian, and other. The Likert-scale survey was converted to one page for the demographic questions and actual survey questions, making it easier to read (see Appendix G). The Spanish survey question number 7 was adjusted (see Appendix H). The tool was easier to read according to pilot participants. No actual question content changed from the original survey.

The full study used a convenience sample with paper surveys collected prior to falls prevention seminars and a final sample of 86% of the seminar attendees completed the survey (N = 271). The data were collected in 10 healthcare centers for older adults. Most participants lived in the community and came to the seminars via their own transportation.

Descriptive Analysis

This section shows the statistical analysis of the demographic data and fall prevention education.

Demographics. No missing demographic data were noted except question #8 (see Appendix G). This question was eliminated because limited responses made it unusable.

The sample consisted of 24% male and 76% female participants for a total of 271 participants (see Table 1). The ethnicity was predominately Hispanic (70.8%) and the next largest ethnicity represented was Caucasian (19.2%). The primary language of participants was English (84%). Almost half of the study participants were 74 years old or older.

Table 1

Demographic Characteristics of Participants' Gender, Ethnicity, Language, and Age

Demographic Characteristic	*N*	% of Participants
Gender		
Male	64	23.6
Female	207	76.4
Ethnicity		
Hispanic	192	70.8
Caucasian	52	19.2
African American	10	3.7
Asian	2	.7
Other	15	5.5
Language		
English	227	83.8
Spanish	44	16.2
Age		
65-67	76	27.0
68-70	32	11.8
71-73	34	12.6
74+	129	47.6

Note. Part I, items 1-3. Language determined by survey preferences; $N = 271$.

Most of the participants reported living alone (46%) or with family (43.5%). The great majority of the participants lived in houses (75%) or apartments (24%). This was to be expected because most of these older adults who participate in the fall prevention seminars are active seniors. See Table 2.

Table 2

Living Arrangements and Type of Dwelling

Living Arrangements/Type of Dwelling	*N*	% of Participants
Living Arrangements		
Live Alone	125	46.1
Live with Family	118	43.5
Live with Friends	28	10.3
Type of dwelling		
House	203	74.9
Apartment	65	24.0
Adult Living Center	3	1.1

Note. Part I, items 4 and 5; *N* = 271.

The participants were asked if they had fallen in the past year, and 38% reported they had fallen in their homes at least once. Despite a report of falling, 78% report they feel healthy or robust. See Table 3.

Table 3

Participants Who Fell Last Year Considering Physical Health

Item		*N*	% of Participants
Fallen in past year			
7	Yes	102	37.6
	No	169	62.4
Health			
9	Robust	32	11.8
	Healthy	179	66.1
	Frail	54	19.9

Note. Part I, items 7 and 9; *N* = 271.

Received fall prevention information education. Most older adults in this study reported that they obtain their healthcare at the doctor's office, accounting for 80% of the participants. Three percent reported never having received any healthcare information. In addition, participants reported getting information from media sources, the majority from pamphlets. See Table 4.

Table 4

Where Participants Obtain Their Healthcare Information

Source of Healthcare Information	*N*	% of Participants
TV	26	9.6
Radio	3	1.1
Online	2	0.7
News	5	1.8
Pamphlets	52	28.4

Note. Part I, Item 10; $N = 271$.

In Part II of the survey, participants agreed or strongly agreed that they had received fall prevention information in particular at the offices of their physicians and other healthcare providers (Table 5).

The participants reported that they received fall prevention information from another method: 46% reported they receive fall prevention information from a video. Twenty-eight percent reported they received fall prevention information from a pamphlet. See Table 6.

Table 5

Source of Fall Prevention Information

Part II	Item	Source	*N*	% of Responses Agreed or Strongly Agreed
When:	5	Every physician visit	48	37.3
	23	Every healthcare visit		27.3
Where:	15	Last year at physician's office	52	28/0
	24	At physician's office		
	18	At wellness program	50	34.3
Who:	19	Nurse	47	30.6
	20	Occupational Therapist	52	18.8
	21	Physical Therapist	49	20.7

Note. $N = 271$.

Although one third of the participants reported getting healthcare information from media (item 10), when the participants were asked how they learn best, face to face (61%) was the clear preference. See Table 6.

Table 6

Older Adults Learn Best (Demographics)

Item	Learn	*N*	% of Responses Agree or Strongly Agreed
6	Face to Face	165	60.9
	Reading a pamphlet	75	27.7
	Watching a video	31	11.4

Note. Part I, Item 6.

Use of fall prevention advice. Unfortunately, much of the advice received is not followed. Although almost half of the participants (47%) agreed or strongly agreed that they were more likely to pay attention to fall prevention information provided by a doctor (Part II,

Item 4), 35% agreed or strongly agreed that they keep meaning to use fall prevention information they received, but have not gotten around to it. Only 31% reported that they had used fall prevention information to make changes in their home. See Table 7.

Table 7

Used Fall Prevention Advice

Part II Item	Used	*N*	% of Responses
3	Meaning to but fall data not used	15	35.4
22	Made changes to home	51	31.0

Referral after a fall. Half of the participants in the sample reported they were given a referral to a physical therapist (18%) or to an occupational therapist (14%) after falling (see Table 8).

Table 8

Referred to Physical or Occupational Therapist

Item	Referred	*N*	% of Responses
16	Physical Therapist	50	17.7
17	Occupational Therapist	50	14

Analysis of Research Questions

Factor analysis was used to determine measures of usefulness, adequacy, and positivity of the fall prevention information provided. Principal component and Cronbach alpha analysis were run to validate the constructs used to answer research questions and ascertain reliability of the instrument within the constructs.

Usefulness. Most participants reported that the information was useful. Most participants (74%) agreed or strongly agreed that the fall prevention information given to them was beneficial. More than half participants (54%) agreed or strongly agreed that fall prevention information was useful in preventing falls in the home. See Table 9.

PCA analysis was run to assess validity. The three items were loaded into one component explaining 68.6% of the variance. Factor loadings were all above .7. The results of the Cronbach's alpha of .77 were evidence that the sums of the three items responses is a reasonable measure of usefulness. See Table 10.

Table 9

Fall Prevention Information Usefulness

Part II Item	Usefulness	*N*	% of Agreed or Strongly Agreed Respondents
2	Fall prevention information beneficial	29	73.8
6	Useful in preventing falls	47	59
14	Useful in preventing falls in the home	42	53.9

Note. $N = 271$.

Table 10

Principal Component Analysis for Factors of Usefulness

Usefulness	KMO	Eigenvalue	% of Variance Explained	Factor Loading	Alpha
2	.681	2.059	68.631	.780	.77
6				.842	
14				.862	

Adequacy. Thirty-seven percent of participants reported that fall prevention information was part of every physician visit. However, only 29% of the participants reported that they were given adequate fall prevention information by a healthcare provider. Twenty-six percent of older adults reported not being offered any fall prevention information when visiting a healthcare provider. Item 25 was removed from analysis because of low alpha level and factor loadings (see Table 11).

Table 11

Fall Prevention Information Adequacy

Part II Item	Adequacy	*N*	% of Agreed or Strongly Agreed Participants
5	Every physician visit	48	37.3
9	Given adequate	50	29.2
12	Asked if fallen	53	35.4
15	Received last year	52	28.0
23	Every visit to healthcare provider	48	27.3
25	Not offered	55	25.5

PCA analysis was run to assess the validity of the measures of adequacy. Five items were loaded into one component explaining 65% of the variance. Factor loadings were all above .7. For adequacy, the Cronbach's alpha was .86. Principal component analysis and alpha results provide evidence that the sums of the five items are reasonable measures of adequacy. See Table 12.

Table 12

Principal Component Analysis for Adequacy

Adequacy	KMO	Eigenvalue	% of Variance Explained	Factor Loading	Alpha
5	.863	3.261	65.225	.786	.86
9				.809	
12				.827	
15				.741	
23				.870	

Positivity. Most participants (56%) agreed or strongly agreed that they were given fall prevention information in a positive manner. Thirty percent reported fall prevention information was presented in a negative manner by a healthcare provider (see Table 13).

Table 13

Positive and Negative Method of Fall Prevention Information Offered

Part II Item	Positive/Negative	*N*	% of Responses
8	Negative	33	30.3
11	Positive	43	56.1

Research Questions

To answer the research questions of this study, three variables were calculated to indicate information was useful, adequate, and positivity. Positivity was dichotomous. Usefulness and adequacy were measured by summation of Likert-scale items.

Research question 1. What is the relationship among perceptions of usefulness, adequacy, and positive experience of fall prevention information among older adults? The positive variable was transformed to a dichotomous scale indicating positive when the participants chose *agree* or *strongly agree* to the statement, "Fall prevention information I received was presented in a positive manner," Part II, item 11 (Appendix G).

Variables to measure usefulness and adequacy were not normal. Therefore, Spearman *rho* was used to measure the strength of these relationships.

A Spearman correlation analyses was conducted. A 2-tailed result of the Spearman's *rho* yielded a significance relationship of usefulness, adequacy, and positive receipt of fall prevention information among older adults. There were strong positive significant correlations. According to Cohen (as cited in *SPSS Survival Manual: A Step-by-Step Guide to Data Analysis Using IBM SPSS* (2013) correlations between .30 and .49 are medium strength of relationships among the variables; however, correlations between .50 and 1.0 are large strengths of variable relationships. See Table 14.

Table 14

Spearman Correlation of Positivity, Adequacy, and Usefulness

Spearman	Usefulness	Adequacy	Positivity
Usefulness	-		
Adequacy	.512 ***	-	
Positivity	.671***	.562***	-

Note: ***$p < .001$ level, $N = 271$

Research question 2. Is there a difference in the perceptions of usefulness and adequacy among older adults who receive fall prevention information in a positive manner and those who receive fall prevention information in a negative manner?

To answer question #2 Mann-Whitney tests were run and both showed a p value < .001. See Table 15. The null hypothesis was rejected. There is evidence to assume that those who received fall prevention information in a positive manner reported it to be more useful and adequate.

Table 15

Mann-Whitney U Test for Usefulness and Adequacy

	Mann Whitney *U*	Sig.
Usefulness	2046.0	.000
Adequacy	2046.0	.000

Note. $N = 271$.

Research question 3. Is there a difference in the perceptions of useful and adequacy of fall prevention information between older adults who live alone and those who live with someone? A frequencies analysis was run to determine validity. Table 16 gives the frequency of each living arrangement most participants reported living alone.

Table 16

Living Arrangements

		Frequency	Percent
Valid	Lives with others	64	23.6
	Lives alone	207	76.4

To answer question 3, Mann-Whitney *U* tests were run because ordinal data were collected, and this test shows the ranking of ordinal data. The Mann-Whitney *U* test showed a *p* value > .001. See Table 17. There was not enough evidence to reject the hypothesis of no difference in the perceptions of usefulness or adequacy of fall prevention information among participants who live alone and those who live with someone.

Table 17. *Mann-Whitney U Test for Ranking of Ordinal Data*

	Median Alone	Median with Others	Std. Dev. with Other	Mann Whitney *U*	Sig.
Usefulness	13.5	14.0	.42551	6384.000	.659
Adequacy	8.0	9.0	.42551	5800.000	.131

See Figure 3 for boxplot of usefulsum and alone.

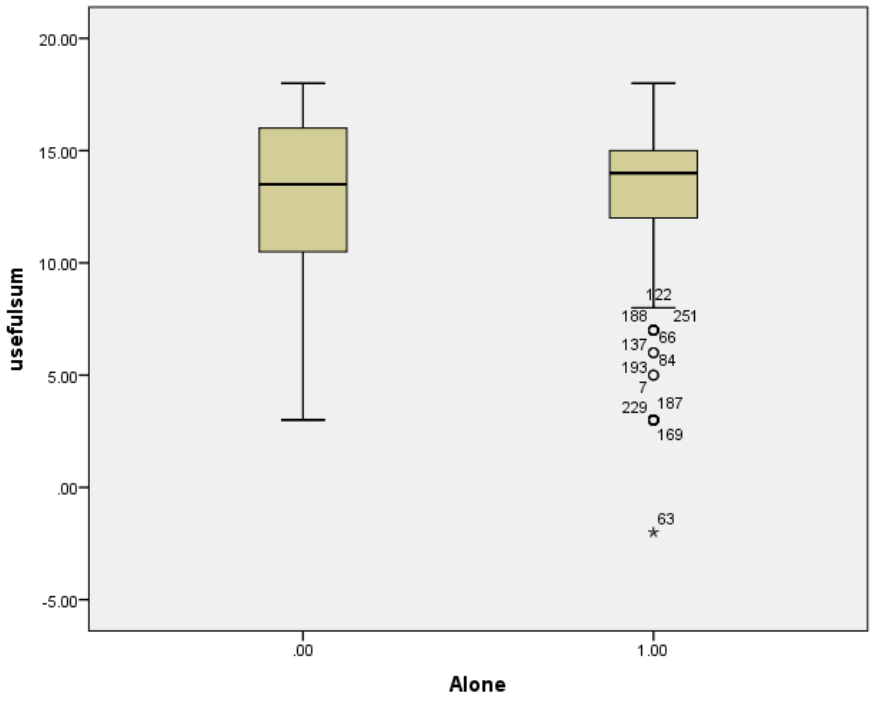

Figure 3. Boxplot of usefulsum and alone.

See Figure 4 for boxplot of adequatesum and alone.

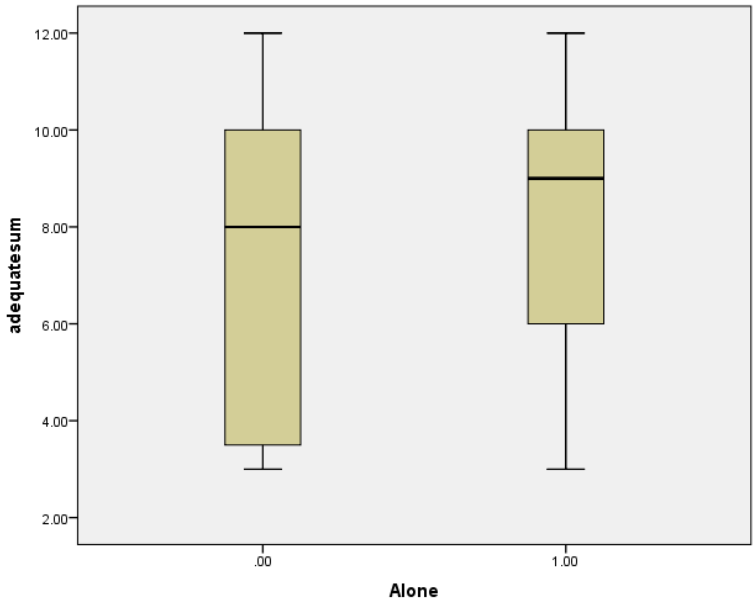

Figure 4. Boxplot of adequatesum and alone.

Summary

In summary, the important results:

- The participants who fell last year equated to 38%. Although, 78% reported they felt healthy and robust.
- Participants (47%) reported they were more likely to pay attention if fall prevention information was provided by a doctor.
- Participants (61%) reported they learn best face to face.

Part II

- Item #6, about 60% of participants said fall prevention information was useful.
- Item # 9, only 29% of participants said fall prevention information was adequate.
- Item# 22, 31% of participants said they would use the fall prevention information in the home.

- Item # 11, 56% of participants said they had been given fall prevention information in a positive manner.
- There were strong positive significant correlations among perceptions of usefulness, adequacy, and positive experience.
- There is evidence to assume that those who received fall prevention information in a positive manner reported it to be more useful and adequate.
- There was not enough evidence to reject the hypothesis of no difference in the perceptions of usefulness or adequacy of fall prevention information among participants who live alone and those who live with someone.

Chapter 5: Qualitative Results

Qualitative Questions

The qualitative portion of this study was conducted to add validity to the quantitative study findings. The qualitative research question was: "What are older adults' perceptions of needs and experiences of fall prevention education provided by healthcare providers? Each participant was interviewed and recorded for accuracy of the transcription of the responses. Interview questions consisted of four open-ended questions as shown below.

Qualitative Data Collection

The qualitative data collection had a two-step approach consisting of two separate interviews with participants from the fall seminars. Each participant was contacted, and an appointment was made, to conduct the first and second interview for data collection. Each participant was reminded that the data collected during the interview were confidential as previously disclosed on the consent obtained during the fall seminars.

The first interview section consisted of structured questions as seen below. Each participant interview was recorded for accuracy of the transcription of the responses. Confirming and disconfirming responses were noted with second interviews asking "Tell me more."

1. What do you feel you need from healthcare providers regarding fall prevention information?
2. What method of fall prevention information have you been given by a healthcare provider meaning a doctor, nurse, physical therapist, or an occupational therapist?
3. What type of fall prevention information is useful for you when visiting a physician?
4. Please explain your experience regarding fall prevention information at the doctor's office?

With second interview questions asking:

1. Tell me a little more about what you need from healthcare providers regarding fall prevention information.
2. Tell me what you think healthcare providers should be discussing with older adults regarding fall prevention information.
3. Tell me a little bit more about what you feel would be beneficial to you in terms of fall prevention information.
4. Tell me about your experience of getting fall prevention information at a doctor's office.

The qualitative interviews took place on October 12, 2014, and October 14, 2014, at the homes of each participant. The interviews were recorded, as stated previously for accuracy of transcription. The first interview lasted approximately 15 minutes per participant as suggested by Merriam (2002). The interview schedule was consistent with each participant being asked the same questions. The analysis involved confirming and disconfirming responses (A. Skukauskaite, personal communication, October 23, 2014).

After the first interview was analyzed, a second contact was made with the participants to conduct the second interview for data collection. The second interview section consisted of open-ended questions. The second interviews took place at the homes of each participant on November 2, 2014, and November 7, 2014. The second interviews were recorded for accuracy of the transcriptions. The second interview lasted approximately 15 minutes per participant. The interview schedule was consistent with each participant being asked the same questions. The second interview was analyzed for emerging themes noted in the responses by the participants. The second interview was conducted with only four of the initial five participants. One of the

participants in the first interview was excluded from the second interview because he felt that none of the fall prevention information pertained to him during his doctor visits, and very little information was elicited during the first interview with this participant. Stevens, Noonan, and Rubenstein (2010) posited that older adults often have a denial of potentially falling. Some older adults do not believe that falls can or will happen to them. Their credence is that falls pertain to others who are frail or ill. Consequently, the necessity to prevent falls does not apply. When an older adult has not suffered a fall, there is less effort to be proactive in preventing falls.

Upon commencing the second interview of open-ended questions, each participant was allowed to read their previous responses. The participants were asked if their responses were what they meant to say during the first interview. Each participant stated that they were in agreement with the transcribed data from the first interview. This process is known as member checking. Member checking was conducted to establish if the finished analysis is what the participant meant to convey, which establishes validity of the data (Merriam, 2002).

The second set of questions occurred in a reverse order. The reverse order of interview questions in the second interview was conducted so the participants would not be biased after reading their answers.

Qualitative Data Analysis

The similarities and differences between interview one and two are presented in the following paragraphs:

Question 1. In the first interview, Participant One was asked, "What do you feel you need from healthcare providers regarding fall prevention information?" Participant one stated she felt that the information provided by healthcare providers should be verbal. "The fall information

does not necessarily need to be provided by the doctor, but the nurse or someone in the office could do it."

During the second interview, the first open-ended question stated: "Tell me a little more about what you need from healthcare providers regarding fall prevention information." In the second interview, participant one stressed what she thought would be beneficial getting fall prevention information to older adults. She also described what she learned in different presentations she had attended about fall prevention.

The similarity in the second interview with participant one was that she thought fall prevention information should be given in a verbal manner by someone in the doctor's office. In the second interview with participant one is that she expressed that a video could be created for fall prevention.

Participant Two in the first interview discussed what types of fall prevention information that she would like the doctor to discuss. However, in the second interview participant two felt the information on fall prevention should be offered to her and reinforced at each doctor visit. The similarity in the second interview with participant two was that fall prevention information should be discussed in the doctor's office. The difference in the second interview with participant two is that she emphasized the need for reinforcement of information.

Participant Three in the first interview stated: "The doctor does not necessarily have to speak to me; it could be anyone." Participant three lives in an upstairs apartment. Participant three discussed what she had learned in previous fall prevention classes. She learned to make several trips with small loads of clothes or packages up and down stairs. In the second interview, participant three described how she had learned to fall in a safe manner after attending a community program. The similarity in the second interview with participant three is that she

discussed her home environment in both interviews. The difference in the second interview with participant three is that she took the focus off the physician and accentuated the necessity of learning to fall in a safe manner.

Participant Four in the first interview stated that fall prevention information from healthcare providers needed to be given in detail that was similar to the second interview response where he stated that the fall prevention information needed to be more graphic. Participant four spent time describing times that he had fallen in his home in the first interview. However, in the second interview, he discussed how healthcare providers needed to take their time with the person during the healthcare visit. The similarity in the second interview with participant four is that he described fall possibilities in his home and yard. He stressed how someone should provide fall prevention addressing those environments. The difference in the second interview with participant four is that he highlighted the need for more time with the healthcare provider.

Question 2. The participants were asked a second question during the first interview: "What method of fall prevention information have you been given by a healthcare provider, meaning a doctor, nurse, physical therapist or occupational therapist?" During the second interview, the open-ended question stated: "Tell me what you think healthcare providers should be discussing with older adults regarding fall prevention."

Participant one stated she had been given nothing this year, but did acknowledge that she received some information from a nurse away from the doctor's office. Upon the second interview, participant one stated that she felt fall presentations were better and the doctor should consider a video or having a person in the front telling older adults about fall prevention. The similarity in the second interview with participant one is that she focused on presentations. The

difference in the second interview with participant one is she felt that a video would be a beneficial method of receiving fall prevention information.

In the first interview, participant two stated that she had received fall prevention information from a nurse and doctor. Upon the second interview, participant two stated that fall prevention information should be offered in the waiting room of the doctor's office. She expressed that she did not want to be treated like she was invisible and wanted to be asked questions in relation to falls. Participant two stressed she would rather be told what to do in the event of an emergency. The similarity in the second interview with participant two is that she received fall prevention information at her doctor's office. The difference in the second interview with participant two is that she did not want to be treated as invisible to the healthcare provider and preferred a personal approach to fall prevention information.

Participant three stated that she received fall prevention information verbally and in video forms from a nurse instructor. In the second interview, participant three stated that the doctor did not have any conversations with her about fall prevention. The similarity in the second interview with participant three is that she received fall prevention information. The difference in the second interview with participant three is that she did not have anyone approach her about fall prevention at her doctor's office.

Participant four stated that the doctor had done a screening exercise to determine his level of balance. He stated he was asked a series of questions and an assessment was conducted, but he did not get any fall prevention information. In the second interview, participant four stated that he thought classes, meetings, or seminars would be a good way to get fall prevention information out to older adults. He added that handouts or videos would be good. Participant four felt that talking is not enough and doctors need to refer the older adult to people or organizations in the

community that offer seminars or presentations regarding fall prevention. The similarity in the second interview with participant three is that he expressed receiving fall prevention information outside the doctor's office. The difference in the second interview with participant four was that he was willing to go outside the doctor's office for fall prevention information if referred by the doctor.

Question 3. During the first interview, question 3 asked: "What type of fall prevention information is useful for you when visiting a physician?" During the second interview, the open-ended question stated: "Tell me a little bit more about what you feel would be beneficial to you in terms of fall prevention information."

Participant one stated that she got a brochure at the doctor's office and she felt that was sufficient. During the second interview participant one conveyed that she thought something visual would be beneficial. The similarity in the second interview with participant one was that she communicated the need for something to be offered by the physician office. The difference in the second interview with participant one is that she felt something visual would be beneficial, but did not state exactly.

Participant two articulated that she felt something verbal or visual would benefit her regarding fall prevention information. She stated she wanted information she could understand. During the second interview, participant two stated that she had a good relationship with her doctor. However, she felt the doctor's focus was specifically on the reason she was there for follow up. The similarity in the second interview with participant two is that the information she received needed to be understandable. The difference in the second interview with participant two was that she focused on what she thought would be beneficial from healthcare providers.

Participant three stated she wanted to be asked if she had fallen, had bruises, or if anything hurt her. She expressed that she had fallen and did not report it since she did not feel bad. Upon the second interview, participant three stated she wanted the doctor to ask if she hurt anywhere. The similarity in the second interview with participant three is that she had a need for someone at her physician's office to ask her if she had fallen. The difference in the second interview with participant three is that she wanted the doctor to elicit the pain she was feeling from her unreported fall.

Participant four stated anything would be useful and that older adults needed to know everything. He focused on knowing about fall prevention outside his home and learning about things that could throw him off balance. During the second interview, participant four discussed that the fall prevention could be explained by someone, not necessarily the doctor. He stated that the person who falls needs to know what they are facing if they fall in terms of recovery. Participant four felt that knowing the possible consequences of a fall were beneficial. The similarity in the second interview with participant four is that he wanted to hear fall prevention information from someone. The difference in the second interview with participant four is that he felt fall prevention information could be given by any healthcare provider.

Question 4. In the first interview, question 4 stated: "Please explain your experience regarding fall prevention information at the doctor's office." The second interview question stated: "Tell me about your experience of getting fall prevention information at a doctor's office."

Participant one stated she received a brochure during the first interview. In the second interview, participant one stated that getting a brochure was the least form of information that could be given since it is convenient. She stated she preferred a video or some form of visual

presentation if possible. The similarity in the second interview with participant one is that the fall prevention information was non-verbal. The difference in the second interview with participant one is that she gave her recommendation of what could be done regarding fall prevention information in the doctor's office given that her only experience had been a brochure.

Participant two stated her experience has been receiving fall prevention information from a nurse through verbal format. During the second interview, participant two stated that the nurse usually gives her fall information in a simple approach that she can understand. She stressed the need for doctors to keep information simplified for older adults. The similarity in the second interview with participant two was how fall prevention information is presented to older adults. The difference in the second interview with participant two was her emphasis on simplicity of the fall prevention information.

Participant three stated that she had not had an experience regarding fall prevention information at her doctor's office. During her second interview, participant three stated what she would like doctors to discuss with her. She suggested that she could be given a book or pamphlet. Participant three stated that a physical exam and a review of safety issues in the home would be beneficial to make her aware of preventing falls. The similarity in the second interview with participant three is that she expressed the information she would like to receive. The difference in the second interview with participant three is that she highlighted what she had not received at her doctor's office.

Participant four expressed that the experience was good with his doctor in the first interview. He stated that he really did not pay attention to information about falls; but as he ages, he believes that going to seminars is helpful as well as hearing information from the doctor. In the second interview, participant four stated the doctor he was seeing resigned and his new

physician seems like he was interested. Participant four stated he was willing to go to meetings if his doctor recommended it. The similarity in the second interview with participant four is that he expressed a need to attend outside seminars about fall prevention. The difference in the second interview with participant four was his willingness to pay attention to fall prevention information when offered.

Confirming and disconfirming responses. The analysis of the open-ended data included confirming and disconfirming data (A. Skukauskaite, personal communication, October 23, 2014). The confirming data responses for question 1 from participant one included:

> I received some talks from a nurse away from the doctor's office. I received fall information from a nurse in a health presentation. They have given me a brochure. They have asked me the question: What do I know about fall prevention? I received a place mat for my table that had fall information that I was given by a center last year.

The disconfirming data responses from participant one included: "Nothing as yet. They haven't asked me those questions. As far as the doctor, the doctor has really not gone into that, or I should say the doctor's office."

The confirming data responses for question 1 from participant two included:

> The last time I went to the doctor, they told me if I was stable on my feet, if I had any dizziness, or had I fallen within a certain amount of time. This is dealing with fall prevention. It has been given to me verbally, not in paper. I feel that I get more information from a nurse interaction on a one-to-one basis. Of course, we get it when we are in a room privately with a nurse. The doctor, too.

The disconfirming data responses from participant two included: "I really haven't been given anything yet. Yes, I have. It's not fall prevention for the elderly."

The confirming data responses for question 1 from participant three included:

> The method given was verbal and video information. I learned a lot. I learned a lot cause it just helps me. Every morning, the instructor advised us before we get up to just sit on the bed a little while, whether you have any type of medical ailments like low BP.

There were no disconfirming responses from participant three.

The confirming data responses for question 1 from participant four included:

> I guess my doctor was one. What they did is have the nurse ask questions and wanted me to perform simple tasks like standing up, sitting down, walking, climbing up stairs. How well you could do. How well coordinated you were. And being able to stand up on your toes, turn different ways, and watch where you were going. They were looking at you while you were doing all these things, you know. I took a balance test, but I think it was part of a checklist besides doing a bunch of other tests you know.

There were no disconfirming responses from participant four.

The confirming data responses for question 2 from participant one included: "A brochure. It was just a brochure actually."

The disconfirming data responses included: "We really didn't discuss it. No one gave me information."

The confirming data responses for question 2 from participant two included: "Verbally and something I can look at that I can relate too and understand because I understand better when I read something."

There were no disconfirming responses from participant two.

There were no confirming responses from participant three.

There were no disconfirming responses from participant three.

The confirming data responses for question 2 from participant four included:

> I guess everything. You need to know everything, not just around the house, but outside the house. You have to be more alert visually. You just have to not see something and there you go face first. You have to pay attention cause even in the backyard, you have to watch where you are walking cause anything can throw you off balance. A little rock. A piece of wood. So you have to be aware, even the sidewalk uneven can cause you to fall. You have to be watching and you have to listen to what people tell you also.

There were no disconfirming responses from participant four.

The confirming data responses for question 3 from participant one included: "It was just a brochure actually. We really didn't discuss it."

There were no disconfirming responses from participant one.

The confirming data responses for question 3 from participant two included: "Well the information is usually given to me by a nurse. Just verbally gave me the information."

There were no disconfirming responses from participant two.

The confirming data responses for question 3 from participant three included: "I never had one."

There were no disconfirming responses from participant three.

The confirming data responses for question 3 from participant four included:

> The experience is good cause it makes you more alert. And before you really didn't pay much attention to. You know, but as you get older, you are more aware of all the things they brought up and bring to your attention. Not just at the doctors, but if you attend seminars, bring that education to learn all these things that you took for granted and never paid any attention to, and now that you are getting older you have to take everything into consideration.

There were no disconfirming responses from participant four.

The confirming data responses for question 4 from participant one:

> What do you feel you need from healthcare providers regarding fall information included, I think it would have more meaning than just a brochure I would rather they address it verbally. That's what I would like at the doctor's office. I would feel that would be better if they did mention it. I know they are very busy, but if they had somebody like a counselor that could talk to you about stuff like that I think it would be more meaningful, it would be better. What they could do is talk individually to a person or get two or three people to have a little talk with the patients. It doesn't have to be the doctor or the nurse, but some staff member could do it.

The disconfirming data responses included: "I don't read the brochure. Where I have received fall information has been in other settings, and I have read those, but when I go to the doctor's office, I just want to get in and get out."

The confirming data responses for question 4 from participant two included:

> Well, I believe I need a lot of reinforcement and most seniors need a lot of reinforcements. Some don't hear. So they need one to one with the physician or nurse

where they could look at a picture. I think that they would understand if they were to look at a picture where they could understand and what you are you are telling them and at the same time they are looking at the picture. At least for someone in the medical field to offer me at my doctor's office a handbook and explain to me even though but still I would like to have it explained to me. That's right. I want to be treated like a patient. When you are on the other side of the desk you begin to realize that I do not want to be treated like I already know this information and that no one needs to tell me. I still need reinforcement. Safety first around the home when we are outside the home in the yard, when we are taking a bath. When getting out of bed. Just getting out of bed can be hard for some seniors, for me it isn't yet. But yeah, mainly the falls when you're in the bathtub, don't slip use the strips for the tub. Be careful when you first get up because I could become dizzy, especially when coming from a stooping position I tend to get dizzy momentarily. I would say to them to be more patient, go slow, help them to understand that fall prevention is part of the care. I would want someone to explain it to me.

Some patients don't want that and that's fine, but at least to take the time to explain it to me and let the patient know that you are really interested in whether they fall down at home or whether they need assistance or home healthcare. We will never know and I would like them to ask me that. It should be addressed at every annual physical, but some seniors will need it at every visit especially if they have walkers, canes, or wheelchairs. But for me, maybe annually and more frequent as I get older. Just to make sure that there are no wires. Safety. A lot of older adults do not know that, be careful around the house, when you go to the rest room. Have a phone close to you. I forgot to mention that as well as getting information from my doctor, my husband and I do go to health fairs and they offer seniors to take their blood pressure, cholesterol but also they give us exercise samples of balls to squeeze, they give us pills crushers, they explain the need to exercise, they give us things for safety. We go to the community center to exercise so we don't fall, exercising yoga, which is very relaxing to a senior because we carry stress even though we do not work, we still carry stress. Quite possible stress could set you up for a fall or heart attack, by walking out of the house because you are so upset you could end up falling because you are not watching where you are going. So these health fairs that they have we go because we like it. We need the interaction with the older adults.

There are wellness centers and we have instructors to help us. We only go to what we can do because we could become dizzy and fall. So I think it is important that they do that and that everybody participate.

There were no disconfirming responses from participant two.

The confirming data responses for question 4 from participant three included:

From healthcare providers, suggestions like we learned in the class that we went too. Like putting things out of the way, carpets. I used to have a little carpet so I removed it. And when I get up from the bed, it was very informative and I just had never even thought about stuff like that. I live in an apartment and my apartment is upstairs. It never even

dawned on me to think, take small trips and not to carry a lot of stuff. I used to do just the opposite, carry as much as I can to make lesser trips to the car from my apartments. Just take little stuff, whatever I can, I used to carry loads just as much as I could and those stairs, now I just take it slow. It is thirteen steps up and down; I count the stairs as I go up and come down. I also hold onto the hand rail. In the past, I was overloaded with groceries, I just wouldn't hold on to the hand rail, that's kind of dangerous. Well, that information that I just mentioned was very helpful to me – I would say lifesaving. A book on fall prevention, no doctor had ever offered that information to me. I took a fall class, it would be for the physician to offer fall information, a book, pamphlet, a class and instructor. They should offer it there. They offer therapy once you have fallen.

Other than a class to offer to avoid a fall in the first place, that would be helpful. A video tape. It never dawned on me to pay attention to stuff like that going up the stairs, down the stairs. Pets can be a hindrance; the dogs are locked in the room until I leave the house. I am very glad I went to the class on fall prevention, to me it was so informative, and I don't know why I had never attended a class like that before. I used to go up the stairs with as much as I could carry. Never thinking that's dangerous, or if my husband is at home, he helps me.

The disconfirming data responses from participant three included: "The doctor does not necessarily have to speak to me. It could be anyone."

The confirming data responses for question 4 from participant four included:

I think they really need to go into detailed depth all the things and not just spend two to three minutes to make you more aware of things and have more visual things so your eye will catch it, you know. Anyway, it might help you remember a lot more things too to see it, not just being told. Pictures of slides to help you remember. A presentation is good if it has something to show, not just telling you things. You have to look for signs also that tells you things are uneven. Bumps and everything. You need to be aware of everything, you need to see so that they register in your mind and you pay more attention. Another thing, as we are getting older, that we need to be more aware of the trips that we have getting to the bathroom, getting in and out of the tub or shower. It is so easy to slip and fall. And another thing you need to have installed are grab bars to have something to hold on to like I did for my parents. This way they never fell. But it is so easy to lose your balance and there you go. And that can cause serious injury to yourself and if there is nobody around, you're stuck. So I think grab bars play a big part of getting in and out of the tub. Not much walking outside the front door but back in what you have on the floor also, make sure you do not have any cords or loose rugs, anything that you might slip on or trip over, you know. Now that you get older, you start falling down all over the place, you know. Don't be drinking cause you will fall. Not to consume so much alcohol as you get older. It is a lot easier when you're old to lose your balance and fall. I have fallen right there in front when getting the water hose. I saw it and said I better watch it and fell. I jumped up before anybody saw me. In the back, X. left something in the yard and I saw it with the corner of my eye, but by the time I saw it, I had stepped on it and down I go. I

> landed on the grass and did not hurt nothing. Another time between those two chairs going to the back and X left some limbs she had cut and I tripped over those and the chair went flying one way and I went the other way. But I did not hurt myself. No, I thought you better watch it, but trying to get to the back carrying those two chairs. You see em, then you think I should have done this, I should have looked, but I had the chairs, you try to do it all in one trip. Good thing I have not broken anything on the times I have fallen. Let's hope it continues that I can keep standing without breaking a hip and I have seen some and they don't walk the same again.

There were no disconfirming responses from participant four.

Emerging themes from responses. When the first and second responses were compared, I began to notice words that resembled the Likert-scale instrument quantitative questions. The analyses of the open-ended data were repetitive responses in the following words expressed by the participants:

> beneficial, doctor, every physician visit, useful in preventing me from falling, video, asked if I have fallen, pamphlet, prevent falls in my home, physician's office, wellness program, nurse, every visit to my healthcare provider, given fall prevention information, and not offered.

The analyses of the first questions were confirming statements of the same responses found in the second interviews.

There were connections in what the participant expressed during both qualitative interviews with the quantitative questions. The three sets of data were triangulated and were part of the results to include the quantitative questions, the first interview questions, and the second interview results. Triangulation of data involves use of three forms of data collection methods and strengthens the internal validity of the study (Merriam, 2002). The qualitative key words aligned with the following quantitative survey questions:

Responses Emerging From Part II of Survey

Question 2: I find the fall prevention information beneficial to me

Question 4: I am more likely to pay attention to fall prevention information if it is provided by a doctor

Question 5: Fall prevention information has been part of every physician visit

Question 6: I think the fall prevention information I received has been useful in preventing me from falling

Question 10: I am more likely to pay attention to fall prevention information if provided in a video

Question 12: I am always asked if I have fallen since my last visit to a healthcare provider

Question 13: Fall prevention information I received was provided in a pamphlet when I visited my healthcare provider

Question 14: I find the fall prevention information I received to be useful to prevent falls in my home

Question 15: I have received fall prevention information in the last year from a physician office

Question 18: I have received fall information from a wellness program

Question 19: I have received fall information from a nurse

Question 23: Fall prevention information is part of every visit to my healthcare provider

Question 24: I have been given fall prevention information at my physician's office on how to prevent falls in my home

Question 25: Fall prevention information is not offered when I see a healthcare provider

Summary of First and Second Interviews

To reflect upon question 1, "Tell me a little more about what you need from healthcare providers regarding fall prevention information," this question implied what participants want from healthcare providers regarding fall prevention information given to them. The responses included a brochure, verbal, or by video. I found the interview responses to be consistent with the quantitative response of how older adults feel they learn where older adults reported they learn face to face, by reading a pamphlet, and by watching a video.

To reflect on question 2, "Tell me what you think healthcare providers should be discussing with older adults regarding fall prevention," see Appendix G. The responses included fall prevention information that is useful, adequate, and positive. I found question 2 to be reflective of the quantitative responses of how fall prevention information is received from healthcare providers. Fall prevention information that was useful fell under the category of usefulness. This included fall prevention information that was beneficial, useful in prevention falls, and fall prevention information that was useful in preventing falls in the home.

Fall prevention information that was adequate fell under the category of adequacy. This included participants who had fall prevention information presented at every physician visit. Participants who were given adequate fall prevention information, or were asked if they had fallen was considered adequate. Participants who received fall prevention information last year or participants who received fall prevention information at every healthcare provider visit were considered adequate. Fall prevention information that was positive fell under the category of positivity. Participants who received fall prevention information in a positive manner reflected positivity.

To reflect upon question 3, “Tell me a little bit more about what you feel would be beneficial to you in terms of fall prevention information,” the results included getting a brochure, verbal discussion, and getting information to prevent falls in the house and yard. One participant stated he did not get any fall information from anyone. I found the results to question 3 to be representative of the correlations among beneficial information and useful in preventing falls in the home in the quantitative results.

To reflect upon question 4, “Tell me about your experience of getting fall prevention information at a doctor’s office,” the emerging theme was older adults want fall prevention information from their healthcare provider. The information can be offered in a book, picture, or verbally. Older adults would like the fall prevention and safety in the home information to be presented at every physical. The fall prevention information does not necessarily have to be given by the physician, but by someone in the physician office. The fall prevention information should go into detail so the older adult understands how to protect themselves. I found the results to be representative of the results for correlations of positivity, usefulness, and adequacy in the quantitative results, which represent the basic variables of fall prevention information among older adults.

Summary

In summary, the qualitative responses gave insight as to how the quantitative responses were answered by the participants. The triangulation of data led me to make the connection of understanding the key words the participants would like to hear and know about have fall prevention information presented to them. I was better able to understand what information the participants wanted to be given regarding fall prevention.

While the participants do not necessarily need a physician presenting fall prevention, they would prefer that a physician tell them and they would carefully listen. The fall prevention information can be offered through a small informal approach or group setting. Offering a brochure about fall prevention is the minimal form of communication requested by older adults. Some participants would prefer to attend outside seminars, while some participants just need fall prevention information presented in a simplistic manner.

The qualitative interviews gave insight to how older adults respond to information and what their needs are related to fall prevention. Each participant gave the reality of what is needed for them. The common responses of "beneficial, doctor, every physician visit, useful in preventing me from falling, video, asked if I have fallen, pamphlet, prevent falls in my home, physician's office, wellness program, nurse, every visit to my healthcare provider, given fall prevention information, and not offered," are part of the thoughts, requests, and results of the participants in the study. This information provided me with the insight to what healthcare providers need to say and write in order to form a successful fall prevention program.

Chapter 6: Results, Limitations, and Future Research

Results

This research study was conducted to investigate the perceptions of older adults regarding the usefulness, adequacy, and positivity of experience in fall prevention information among older adults living in the community when received from healthcare professionals. While this study was conducted in several locations in the southern region of Texas, the intent was to obtain the perceptions of older adults regarding fall prevention education.

Healthcare providers have been giving fall prevention information to older adults through various avenues over the years. This study sought to reveal the perceptions of older adults about how fall prevention education was received, so that healthcare providers could use the results to create better fall prevention programs.

To investigate the perceptions of older adults regarding the usefulness, adequacy, and positive experience of fall prevention information, three questions were asked. The first question investigated the relationship among perceptions of usefulness, adequacy, and positive experience of fall prevention information among older adults.

Second, the study sought to find whether there was a difference in the perceptions of usefulness and adequacy among older adults who receive fall prevention information in a positive manner and those who receive fall prevention information in a negative manner.

Third, the study sought to find whether there was a difference in the perceptions of usefulness and adequacy of fall prevention information between older adults who live alone and those who live with someone.

Fourth, the study sought to understand the older adults' perceptions of needs and experiences of fall prevention education provided by healthcare providers.

Support of the Theoretical Models

Orem. This study supported part of the theoretical model of self-care and perceptions presented by Orem (as cited in Alligood, 2004). The older adults in this study expressed the need for guidelines to prevent falls as in previous work of Parissopoulos and Kotzabassaki (2004) and Alligood (2004). Orem was not supported because although 60% said it was useful, only 31% of the participants used the fall prevention information.

Fall prevention models. The study partially supported the researcher-developed model theory of perception of fall prevention. The participants reported what they want to hear in order to process information to memory as supported by Kolb (1984).

The perception of a positive or negative experience was examined to how it influenced perceptions of usefulness and adequacy of fall prevention information. The reflective knowledge of the older adults about the experience left a positive or negative memory that altered how the information was useful and adequate. As in Merriam et al. (2007), the manner in which older adults received fall prevention information had an effect on whether it was used.

The study showed that the fall prevention information was considered useful by 60% of the participants and could be used to create a safer situation in the home, as also found by Geddes and Grosset (2006).

The perception of adequacy was defined as whether the information received about fall prevention was sufficient to meet the needs of the learner (Kolb, 1984). The study showed that the fall prevention information was considered adequate by only 29% of the participants and only 31% reported using the information at home.

Kolb (1984) reported that the perception of a positive experience would result in cognitive knowledge that would be implemented in the home; however, although 56% reported a positive experience, only 31% said they made changes in their home.

General Findings

The qualitative results offered understanding about the quantitative responses by the participants. There was a connection among the responses of the participants in the interviews and the quantitative survey. The qualitative section of the study offered information about how participants wanted to hear and know about fall prevention information.

The preferred methods of how fall prevention information should be offered to older adults were described. The participants do not necessarily need a physician presenting fall prevention information to them. However, they do want someone in the physician office to address the topic, preferably their physician as requested. Whether the fall prevention information is offered in the physician's office, through group sessions, or the older adult is referred a formal presentation about fall prevention, older adults want this type of information at least on a yearly basis.

The perceptions of older adults regarding fall prevention information were captured in this study. These perceptions included usefulness of the material presented. The fall prevention information must be understandable and given by someone who can present the information with visual prompts to engage the memory.

Limitations

The quantitative results revealed several limitations in the study. The first limitation was that the survey instrument was a first-generation Likert-scale. The instrument had a flaw in how it was set up for data collection. The survey instrument consisted of a "not applicable" column

that led to an inability to run a multivariate analysis. Using a first-generation Likert-scale has been a learning experience. Many of the variables needed transformation in order to be computed into useable factors for analysis.

Implications and Discussion

The perceptions of usefulness, adequacy, and positivity determine if the experience was well received. The fall prevention information must be presented in a positive manner. Older adults respond better to positive information and participants have volunteered that fall prevention information is important to them. The information the participants wanted to be given regarding fall prevention prepares the healthcare professional for how to develop programs for which older adults will respond.

Healthcare workers need to be cognizant that although older adults may fall, they usually consider themselves healthy and robust. Healthcare workers need to remember that older adults are most likely to pay attention when they hear fall prevention information from their physician. The physician needs to be the main focus in presenting fall prevention information to the older adult as the participants have requested. Participants have an expectation that the physician will deliver the fall prevention information. Older adults would like to have fall prevention information given to them on at least a yearly basis in a structured manner.

Healthcare workers need to remember that older adults prefer to learn face to face. These are the implications needed to prepare better fall prevention programs. The interaction of community fall prevention information presentations allows older adults to ask questions and receive feedback in real time. Older adults feel cared for and nurtured by their healthcare providers who refer them to the community opportunities available for them to learn and interact with others.

Healthcare providers need to embrace the feedback provided by older adults in this study. When healthcare providers give fall prevention information to older adults, it is often assumed that the information will be implemented in the home. However, there is no real confirmation to the implementation of information learned. This study provided the needed feedback that healthcare providers need to ascertain whether their teaching efforts have been retained and will be used by older adults.

Participants have given suggestions for the way they want to receive fall prevention information. The way fall prevention information is given to them is very important and who provides the information determines whether they will listen and use the suggested preventative measures in their homes to prevent falls.

Older adults have spoken and healthcare providers must listen if they want to administer fall prevention programs that older adults will respond to by making changes in their homes and lives. When fall prevention programs are planned by healthcare providers, the perceptions of older adults must be considered.

Fall prevention among older adults has three variables that make it certain as to what healthcare providers should use when developing fall prevention programs. The implications of the study are twofold. First, healthcare professionals can use the information learned to develop more effective fall prevention programs for older adults. The study provided the prospective of the older adult in what they feel they need regarding fall prevention information. Older adults want to receive fall prevention information that is understandable and useful to them. The older adult wants to hear fall prevention information that they can use in their home. They would like fall prevention information to be simple enough to implement in their homes. Fall prevention

information that is easy to understand helps the older adult to remember what was said by the healthcare provider.

The fall prevention program must be useful to the older adult in terms of application to the home environment. Suggestions for fall prevention need to be relevant to the person. The fall prevention program must be adequate to the needs of older adults. Some older adults do not need large adjustments in their home and some need more than others.

The fall prevention program must display a sense of positivity as negative approaches will not be heard. Older adults want to be treated with dignity and care by healthcare providers. Healthcare professionals can only prosper from the wisdom and knowledge gained from this study in preventing falls among older adults in the community.

This study added knowledge to how older adults learn. As previously noted in the literature and in the theoretical framework, committing knowledge to memory is the basis for learning. The knowledge gained from this study adds to the ability to understand older adults in their learning habitat. The knowledge gained makes the ability to assist older adults in the prevention of falls less challenging.

In reflection, this study sought to find out what type of fall prevention information was being given to older adults in the physician's office. The conclusion is that older adults want fall prevention to be offered by someone in the healthcare profession in a manner that makes sense to them. Older adults want fall prevention information to be the forethought of their physician or healthcare provider so that they can know how to prevent falls in their home. The fall prevention information must be realistic and personal. The prevention of one fall can make the difference of a healthier future for older adults.

Future Research

While this study did produce some significant results, further research is needed. This study consisted of a first-generation Likert-scale instrument, and some to the questions are in need of further development so that more precise data can be extracted. A more precise survey instrument to allow for an extensive multivariate analysis is needed.

A two-step approach to data collection in conjunction with face to face, such as electronic data collection, could be added to gather more participation. The use of online survey would create the ability to reach more participants beyond the boundaries conducted in this study. There is also the possibility of e-mail surveys since many older adults have computers in their homes. Future research could include the use of pre- and post-tests to determine what the risks are in the home and what changes older adults are willing to make to prevent falls.

A larger sample size would be beneficial involving a broad base of the country, as this study was confined to a small southern area of Texas. As older adults represent the fastest growing national population (U.S. Department of Health and Human Services, 2011), there is an opportunity to explore senior living centers as a source of information from the older adults who live in these communities.

The time spent on this study could be lengthened to include more participants into the study. This study was conducted over a nine-month timeframe. The qualitative portion of the study was conducted to give the quantitative results support; yet, many of the responses reflected what was asked in the quantitative survey instrument. A new study might want to omit the qualitative section of the study or only provide a qualitative approach in the future.

The perceptions of older adults regarding fall prevention can range beyond its usefulness, adequacy, and positivity. Future research may want to be conducted using more variables inquiring whether older adults truly implement changes in the home.

Future research could inquire whether older adults share the information they learn with other older adults in the community. Determining how many falls have occurred with participants of the current study would also be an interesting follow-up study to determine if preventive measures were taken and whether information was retained. Future research could be focused on those older adults who have fallen as compared to those who have not fallen. In retrospect, these are some of the questions that remain a mystery and leave opportunity for new research.

References

Administration on Aging. (2011). *A profile of older Americans: 2011*. Retrieved from http://www.aoa.gov/Aging_Statistics/Profile/2011/docs/2011profile.pdf

Al-Aama, T. (2011). *Falls in the elderly. Spectrum and prevention*. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3135440/

Alligood, M. (2004). Self-care theory in nursing: Selected papers of Dorothea Orem. *Journal of Advanced Nursing, 45*(5), 549-549. doi:10.1111/j.1365-2648.2004.2945_2.x

Arcury, T. A., Quandt, S. A., & Bell, R. A. (2001). Staying healthy: The salience and meaning of health maintenance behaviors among rural older adults in North Carolina. *Social Science & Medicine, 53*(11), 1541-1556. doi:10.1016/s0277-9536(00)00442-1

Binder, S. (2002). Injuries among older adults: The challenge of optimizing safety and minimizing unintended consequences. *Injury Prevention, 8*(90004), 2iv2-4. doi:10.1136/ip.8.suppl_4.iv2

Blank, W. A., Freiberger, E., Siegrist, M., Landendoerfer, P., Linde, K., Schuster, T., . . . Halle, M. (2011). An interdisciplinary intervention to prevent falls in community-dwelling elderly persons: Protocol of a cluster-randomized trial [PreFalls]. *BMC Geriatrics, 11*(1), 7. doi:10.1186/1471-2318-11-7

Campbell, A. J., & Robertson, M. C. (2007). Rethinking individual and community fall prevention strategies: A meta-regression comparing single and multifactorial interventions. *Age and Ageing, 36*(6), 656-662. doi:10.1093/ageing/afm122

Centers for Disease Control and Prevention (CDC). (2008a). *Costs of falls among older adults.* Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html

Centers for Disease Control and Prevention (CDC). (2008b). *Preventing falls: How to develop community-based fall prevention programs for older adults.* Retrieved from http://www.cdc.gov/homeandrecreationalsafety/Falls/community_preventfalls.html

Centers for Disease Control and Prevention (CDC). (2008c). *Self-reported falls and fall-related injuries among persons aged greater than 65 years. United States.* Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5709a1.htm

Centers for Disease Control and Prevention (CDC). (2012a). *Falls among older adults: An overview.* Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html

Centers for Disease Control and Prevention (CDC). (2012b). *QuickStats: Rate of nonfatal, medically consulted fall injury episodes, by age group.* Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6104a8.htm

Centers for Disease Control and Prevention (CDC). (2014). *Cost of falls among older adults*. Retrieved from http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html

Centers for Medicare & Medicaid Services. (2012). *OASIS-C process-based quality improvement (PBQI) manual.* Retrieved from http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/PBQIProcessMeasures.html

Cho, E., Kim, E.-Y., & Lee, N.-J. (2013). Effects of informal caregivers on function of older adults in home health care. *Western Journal of Nursing Research, 35*(1), 57-75. Retrieved from http://www.wjn.sagepub.com/content/35/1/57.full.pdf+html

Clipper, B. (2013). *The nurse manager's guide to an intergenerational workforce.* Indianapolis, IN: Sigma Theta Tau International Honor Society of Nursing.

Comley, A. (1994). A comparative analysis of Orem's self-care model and Peplau's interpersonal theory. *Journal of Advanced Nursing, 20*(4), 755-760. Retrieved from http://www.dx.doi.org/10.1046/j.1365-2648.1994.20040755.x

Costello, E., & Edelstein, J. E. (2008). Update on falls prevention for community-dwelling older adults: Review of single and multifactorial intervention programs. *Journal of Rehabilitation Research & Development, 45*(8), 1135-1152. doi:10.1682/jrrd.2007.10.0169

Creswell, J. W. (Ed.). (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River, NJ: Pearson, Merrill Prentice Hall.

Creswell, J. W. (Ed.). (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles, CA: Sage Publications.

Crilly, R. G., Hillier, L. M., Mason, M. Gutmanis, I., & Cox, L. (2010). Prevention of hip fractures in long-term care: Relevance of community-derived data. *Journal of the American Geriatrics Society, 58*(4), 738-745. doi:10.1111/j.1532-5415.2010.02766.x

Cronk, B. C. (Ed.). (2012). *How to use SPSS. A step-by-step guide to analysis and interpretation.* (5th ed.). Glendale, CA: Pyrczak.

Cuenca, A. E. (2012). Making Medicare wellness visits work in practice. *Family Practice Management, 19*(5), 11-16. Retrieved from http://www.aafp.org/fpm/2012/0900/p11.html

Davis, M. A., Moritz, D. J., Neuhaus, J. M., Barclay, J. D., & Gee, L. (1997). Living arrangements, changes in living arrangements, and survival among community dwelling

older adults. *American Journal of Public Health, 87*(3), 371-377. doi:10.2105/ajph.87.3.371

Dibartolo, M. C., & McCrone, S. (2003). Recruitment of rural community-dwelling older adults: Barriers, challenges, and strategies. *Aging & Mental Health, 7*(2), 75-82. doi:10.1080/1360786031000072295

Dickinson, A., Horton, K., Machen, I., Bunn, F., Cove, J., Jain, D., & Maddex, T. (2011). The role of health professionals in promoting the uptake of fall prevention interventions: A qualitative study of older people's views. *Age and Ageing, 40*, 724-730. doi:10.1093/ageing/afr111

Drageset, J., Kirkevold, M., & Espehaug, B. (2011). Loneliness and social support among nursing home residents without cognitive impairment: A questionnaire survey. *International Journal of Nursing Studies, 48*(5), 611-619. doi:10.1016/j.ijnurstu.2010.09.008

Elderhostel. (2013). *Road scholar. Adventures in lifelong learning.* Retrieved from http://www.roadscholar.org//about/history.asp

Elley, C. R., Robertson, M. C., Garrett, S., Kerse, N. M., McKinlay, E., Lawton, B., . . . Campbell, A. J. (2008). Effectiveness of a falls-and-fracture nurse coordinator to reduce falls: A randomized, controlled trial of at-risk older adults. *Journal of the American Geriatrics Society, 56*(8), 1383-1389. doi:10.1111/j.1532-5415.2008.01802.x

Elliott, S., Painter, J., & Hudson, S. (2009). Living alone and fall risk factors in community-dwelling middle age and older adults. *Journal of Community Health, 34*, 301-310. Retrieved from http://www.tandfonline.com/doi/pdf/10.1080/07370010802221685#.VRTCD8J0wr8

Eshbaugh, E. M. (2008). Perceptions of living alone among older adult women. *Journal of Community Health Nursing, 25*(3), 125-137. doi:10.1080/07370010802221685

Fall Prevention Alarms. (2013). *Balancing freedom and protection*. Retrieved from http://stores.fallpreventionalarms.com

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175-191. doi:10.3758/bf03193146

Ford, R., & Orel, N. (2005). Older adult learners in the workforce: New dimensions to workforce training needs. *Journal of Career Development, 32*(2), 139-152. doi:10.1177/0894845305279165

French, D. D., Campbell, R., Spehar, A., Rubenstein, L. Z., Branch, L. G., & Cunningham, F. (2007). National outpatient medication profiling: Medications associated with outpatient

fractures in community-dwelling elderly veterans. *British Journal of Clinical Pharmacology, 63*(2), 238-244. doi:10.1111/j.1365-2125.2006.02798.x

Frick, K. D., Kung, J. Y., Parrish, J. M., & Narrett, M. J. (2010). Evaluating the cost-effectiveness of fall prevention programs that reduce fall-related hip fractures in older adults. *Journal of the American Geriatrics Society, 58*(1), 136-141. doi:10.1111/j.1532-5415.2009.02575.x

Fuller, G. (2000). Falls in the elderly. *American Family Physician, 61*(7), 2159-2168. Retrieved from http://www.aafp.org/afp/2000/0401/p2159.html

Geddes & Grosset. (2002). *Webster's dictionary and thesaurus for home, school and office with color atlas.* South Lanarkshire, Scotland: New Lanark Mill, David Dale House.

Hallrup, L. B., Albertsson, D., Tops, A. B., Dahlberg, K., & Grahn, B. (2009). Elderly women's experiences of living with fall risk in a fragile body: A reflective lifeworld approach. *Health and Social Care in the Community, 17*(4), 379-387. Retrieved from http://dx.doi.org/10.1111/j.1365-2524.2008.00836.x

Harling, A., & Simpson, J. P. (2008). A systematic review to determine the effectiveness of Tai Chi in reducing falls and fear of falling in older adults. *Physical Therapy Reviews, 13*(4), 237-248. doi:10.1179/174328808x309241

Harris, P., Nagy, S., & Vardaxis, N. J. (Eds.). (2009). *Mosby's dictionary of medicine, nursing and health professions*. St. Louis, MO: Elsevier Australia. Retrieved from http://books.google.com/books?id=VXaeyMOhTpEC

Hawley, H. (2009). Older adults' perspectives on home exercise after falls rehabilitation: Understanding the importance of promoting healthy, active ageing. *Health Education Journal, 68*, 207-218. Retrieved from http://dx.doi.org/10.1177/0017896909339533

Hendriks, M. R. C., Bleijlevens, M. H. C., Van Haastregt, J. C. M., Crebolder, H. F. J. M., Diedericks, J. P. M. , Evers, S. M. A. A, . . . Van Eijk, J. T. M. (2008). Lack of effectiveness of a multidisciplinary fall-prevention program in elderly people at risk: A randomized, controlled trial. *Journal of the American Geriatrics Society, 56*(8), 1390-1397. doi:10.1111/j.1532-5415.2008.01803.x

Hobbs, F. B., & Damon, B. L. (1996). *65 + in the United States* (23-190). Retrieved from http://www.books.google.com/books

Holiday, A. (2007). *Doing and writing qualitative research* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Hosseini, H., & Hosseini, N. (2008). Epidemiology and prevention of fall injuries among the elderly. *Hospital Topics, 86*(3), 15-20. doi:10.3200/htps.86.3.15-20

Huang, T.-T., & Acton, G. J. (2004). Effectiveness of home visit falls prevention strategy for Taiwanese community-dwelling elders: Randomized trial. *Public Health Nursing, 21*(3), 247-256. doi:10.1111/j.0737-1209.2004.21307.x

Hwang, J. E. (2012). Development and validation of a 15-item lifestyle screening for community-dwelling older adults. *American Journal of Occupational Therapy, 66*(6), e98-e106. doi:10.5014/ajot.2012.005181

Jacobson, B. H., Thompson, B., Wallace, T., Brown, L., & Rial, C. (2011). Independent static balance training contributes to increased stability and functional capacity in community-dwelling elderly people: A randomized controlled trial. *Clinical Rehabilitation, 25*(6), 549-556. doi:10.1177/0269215510392390

Japsen, B. (2012). Obamacare's Medicare wellness benefit 'nobody knows' about. *Pharma & Healthcare. Forbes*. Retrieved from http://www.forbes.com/sites/brucejapsen/2012/04/24/obamacares-medicare-wellness-benefit-nobody-knows-about/

Jarvis, P. (2000). *Learning in later life. An introduction for educators and careers.* London, England: Kogan Page Limited. doi:10.4324/9781315042435

Jeske, L., Kolmer, V., Muth, M., Cerns, S., Moldenhaur, S., & Hook, M. L. (2006). Partnering with patients and families in designing visual cues to prevent falls in hospitalized elders. *Journal of Nursing Care Quality, 21*(3), 236-241. doi:10.1097/00001786200607000-00008

Kannus, P., Sievanen, H., Palvanen, M., Jarvinen, T., & Parkkari, J. (2005). Prevention of falls and consequent injuries in elderly people. *The Lancet, 366*(9500), 1885-1893. doi:10.1016/s0140-6736(05)67604-0

Karlsson, M. K., Vonschewelov, T., Karlsson, C., Coster, M., & Rosengen, B. E. (2013). Prevention of falls in the elderly: A review. *Scandinavian Journal of Public Health, 41*(5), 442-454. doi:10.1177/1403494813483215

Kelsey, J. L., Berry, S. D., Procter-Gray, E., Quach, L., Nguyen, U.-S. D. T., Li, W., . . . Hannan, M. T. (2010). Indoor and outdoor falls in older adults are different: The maintenance of balance, independent living, intellect, and zest in the elderly of Boston study. *Journal of the American Geriatrics Society, 58*(11), 2135-2141. doi:10.1111/j.15325415.2010.03062.x

Kemle, K. (2011). Falls in older adults: Averting a disaster. *Clinical Advisor, 14*(2), 50-56. Retrieved from http://www.clinicaladvisor.com/falls-in-older-adults-averting-a-disaster/article/195485/

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Upper Saddle River, NJ: Prentice-Hall.

Kuehn, B. M. (2010). Primary care screening and intervention helps prevent falls among elderly. *JAMA, 303*(20), 2019. doi:10.1001/jama.2010.640

Lewis, S. M., Heitkemper, M. M., Dirksen, S. R., Bucher, L., & O'Brien. P. G. (Ed.). (2007). *Medical-surgical nursing: Assessment and management of clinical problems* (7th ed.). Philadelphia, PA: Mosby.

Limona, D. (2009). Injuries and the cost of falls among older adults—How pharmacists can help. *Journal of Pharmacy Practice, 22*(3), 344-345. doi:10.1177/0897190009333607

Lopez, C. (2013). *Model theory of perceptions of fall prevention provided by healthcare professionals in older adults.* Unpublished model.

Lord, S. R., Menz, H. B., & Sherrington, C. (2006). Home environment risk factors for falls in older people and the efficacy of home modifications. *Age & Ageing, 35*(Supplement 2), ii55-ii59. doi:10.1093/ageing/afl088

Mack, R., Salmoni, A., Viverais-Dressler, G., Porter, E., & Garg, R. (1997). Perceived risks to independent living: The views of older, community-dwelling adults. *The Gerontologist, 37*(6), 729-736. doi:10.1093/geront/37.6.729

Maejima, H., Sunahori, H., Otani, T., Sakamoto, N., Yoshimura, O., & Tobimatsu, Y. (2009). Effect of long-term, community-based daily exercise on the ability to control the dynamic standing balance of Japanese elderly persons in relation to falls. *Nursing & Health Sciences, 11*(2), 128-134. doi:10.1111/j.1442-2018.2009.00453.x

Mayo Clinic Staff. (2014). *Parkinson's disease symptoms*. Retrieved from http://www.mayoclinic.com/health/parkinsons-disease/DS00295/DSECTION=symptoms

McClure, R. J., Turner, C., Peel, N., Spinks, A., Eakin, E., & Hughes, K. (2005). Population-based interventions for the prevention of fall-related injuries in older people. *Reviews*. doi:10.1002/14651858.cd004441.pub2

Merrett, A., Thomas, P., Stephens, A., Moghabghab, R., & Gruneir, M. (2011). A collaborative approach to fall prevention. *Canadian Nurse, 107*(8), 24-29. Retrieved from http://web.b.ebscohost.com.uiwtx.idm.oclc.org/ehost/pdfviewer/pdfviewer?sid=e19ecec9-f16a-4a1e-961f-9d985827e439%40sessionmgr111&vid=1&hid=105 0008-4581

Merriam, S. B. (2002). *Qualitative research in practice. Examples for discussion and analysis.* San Francisco, CA: Jossey-Bass.

Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). Learning environments and learning concepts. In Jossey-Bass (3rd ed.), *Learning in adulthood: A comprehensive guide* (pp. 27-52). San Francisco, CA: Jossey-Bass.

Mitchell, E., & Lawes, H. (2008). Falls education for practitioners: Auditing a three-tier learning approach. *Nursing Older People, 20*(1), 27-30. doi:10.7748/nop2008.02.20.1.27.c6347

Mitchell, M. (2011). Falls prevention among the elderly: An update from Age UK. *British Journal of Community Nursing, 16*(6), 300-301. doi:10.12968/bjcn.2011.16.6.300

Moon, M. A. (2012). Exercise the best intervention to prevent falls. *Family Practice News, 42*(16), 32-33. doi:10.1016/s0300-7073(12)70681-3

Murphy, S. (2007). *Leading a multigenerational workforce*. Retrieved from http://assets.aarp.org/www.aarp.org_/cs/misc/leading_a_multigenerational_workforce.pdf

Naaldenberg, J., Vaandrager, L., Koelen, M., & Leeuwis, C. (2011). Aging populations' everyday life perspectives on health aging: New insights for policy and strategies at local level. *Journal of Applied Gerontology, 31,* 711-733. Retrieved from http://dx.doi.org/10.1177/0733464810397703

Naik, A. D., Burnett, J., Pickens-Pace, S., & Dyer, C. B. (2008). Impairment in instrumental activities of daily living and the geriatric syndrome of self-neglect. *The Gerontologist, 48*(3), 388-393. doi:10.1093/geront/48.3.388

National Institute of Health. (2015). *Falls and fractures*. Retrieved from http://www.nia.nih.gov/health/publication/falls-and-fractures

National Institute on Aging. (2013). *Senior health. Built with you in mind*. Retrieved from http://www.nihseniorhealth.gov/falls/aboutfalls/01.html

National Safety Council. (2015). *Prevent falls in and outside of your home.* Retrieved from http://www.nsc.org/learn/safety-knowledge/Pages/safety-at-home-falls.aspx

Oliver, D. (2007). Older people who fall: Why they matter and what you can do. *British Journal of Community Nursing, 12*(11), 500-507. doi:10.12968/bjcn.2007.12.11.27481

Onedera, J. D., & Stickle, F. (2008). Healthy aging in later life. *The Family Journal, 16*(1), 73-77. doi:10.1177/1066480707309610

Parissopoulos, S., & Kotzabassaki, S. (2004). Orem's theory, transactional analysis and the managements of elderly rehabilitation. *ICUS & Nursing Web Journal, 17*, 1-11.

Philips Lifeline. (2013). *Lifeline medical alert service*. Retrieved from http://www.lifelinesys.com/content/

Pinquart, M., & Sorensen, S. (2011). Spouses, adult children, and children-in-law as caregivers of older adults: A meta-analytic comparison. *Psychology & Aging, 26*(1), 1-14. doi:10.1037/a0021863

Podsiadlo, D., & Richardson, S. (1991). Timed Up and Go Test (TUG): A test of basic functional mobility for frail elderly persons. *Journal of the American Geriatrics Society, 39*(2), 142-148.

Portacolone, E. (2011). The myth of independence for older Americans living alone in the Bay Area of San Francisco: A critical reflection. *Aging & Society, 31*(05), 803-828. doi:10.1017/s0144686x10001169

Roberto, K. A., Allen, K. R., & Blieszner, R. (2001). Older adults' preferences for future care: Formal plans and familial support. *Applied Developmental Science, 5*(2), 112-120. Retrieved from http://dx.doi.org/10.1207/s1532480xads0502_6

Rogers, E., & Wiatrowski, W. J. (2005). Injuries, illnesses, and fatalities among older workers. *Monthly Labor Review,* 24-30. Retrieved from http://www.bls.gov/opub/mlr/2005/10/art3full.pdf

Rose, D. J. (2008). Preventing falls among older adults: No "one size suits all" intervention strategy. *Journal of Rehabilitation Research & Development, 45*(8), 1153-1166. doi:10.1682/JRRD.2008.03.0041

Roth, D. L., Haley, W. E., Wadley, V. G., Clay, O. J., & Howard, G. (2007). Race and gender differences in perceived caregiver availability for community-dwelling middle-aged and older adults. *The Gerontologist, 47*(6), 721-729. doi:10.1093/geront/47.6.721

Scott, V., Bawa, H., Feldman, F., Sims-Gould, J., Leung, M., & Tan, N. (2008). Promoting active living (PAL): Best practice guidelines for fall prevention in assisted living. *British Columbia Ministry of Healthy Living and Sport, 4*(1), 1-33. Retrieved from http://www.injuryresearch.bc.ca/wp-content/uploads/2014/08/PAL.pdf

Shah, M. N., Caprio, T. V., Swanson, P., Rajasekaran, K., Ellison, J. H., Smith, K., . . . Katz, P. (2010). A novel emergency medical services-based program to identify and assist older adults in a rural community. *Journal of the American Geriatrics Society, 58*(11), 2205-2211. doi:10.1111/j.1532-5415.2010.03137.x

Shin, K.-R, Kang, Y. Kang, E.-H. Hwang, & Jung, D. (2009). The prevalence, characteristics, and correlates of falls in Korean community-dwelling older adults. *International Nursing Review, 56*(3), 387-392. Retrieved from http://dx.doi.org/10.1111/j.1466-7657.2009.00723.x

Sjösten, N. M., Salonoja, M., Piirtola, M., Vahlberg, T., Isoaho, R., Hyttinen, H., . . . Kivelä, S.-L. (2007). A multifactorial fall prevention programme in home-dwelling elderly people: A randomized-controlled trial. *Public Health, 121*(4), 308-318. doi:10.1016/j.puhe.2006.09.018

Smeeth, L. L., & Iliffe, S. (2008). Community screening for visual impairment in the elderly. *Reviews*. doi:10.1002/14651858.cd001054.pub2

SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS. (2013). *Australian and New Zealand Journal of Public Health, 37*(6), 597-598. doi:10.1111/17536405.12166

Stephenson, J. (2009). Preventing falls in the elderly. *JAMA, 302*(19), 2083. doi:10.1001/jama.2009.1681

Stevens, J. A., Noonan, R. K., & Rubenstein, L. Z. (2010). Older adult fall prevention: Perceptions, beliefs, and behaviors. *American Journal of Lifestyle Medicine, 4*(1), 16-20. doi:10.1177/1559827609348350

Sura, A. & Shah, N. R. (2010). Pay-for-performance initiatives; modest benefits for improving healthcare quality. *American Health & Drug Benefits, 3*(2). Retrieved from http://issuu.com/ahdbonline/docs/2010_march-april?e=1274411/4739699

Survey System. (2012). Retrieved from http://www.surveysystem.com/sscalc.htm#one

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Pearson Education.

Taylor, S. G. (2006). Dorothea E. Orem. Self-care deficit theory of nursing. In A. Tomey & M. R. Alligood (Eds.), *Nursing theorists and their work* (7th ed.). St. Louis, MO: Elsevier Health Sciences. Retrieved from http://www.barnesandnoble.com

Texas A&M System. (2010). *Improving independence in the home environment: Assessment and intervention*. Retrieved from http://fcs.tamu.edu/families/aging/fall_prevention/pdf/assessement-intervention.pdf

Texas Department of Aging and Disability Services. (2011-2013). *Demographic information on older persons*. Retrieved from http://www.dads.state.tx.us/news_info/publications/planning/stateplanonaging/2011-2013/attachmentc.html

Texas Department of State Health Services. (2012). *Texas population, 2012* (Estimates). Retrieved from http://www.dshs.state.tx.us/chs/popdat/ST2012e.shtm

Texas state senior games San Antonio. (2013). *Sports for Life*. Retrieved from http://www.saseniorgames.com/

Theeke, L. A., & Mallow, J. (2013). Loneliness and quality of life in chronically ill rural older adults. *American Journal of Nursing, 113*(9), 28-37. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/23958674

Thomas, D. C., Edelberg, H. K., & Tinetti, M. E. (2003). Falls. *Geriatric Medicine*, 979-994. doi:10.1007/0-387-22621-4_67

U.S. Census Bureau. (2012). *Persons 65 years old and over–characteristics by sex* 1990 to 2010. Retrieved from http://www.census.gov/compendia/statab/2012/tables/12s0034.pdf

U.S. Department of Health and Human Services. (2011). *A profile of older Americans: 2011*. Retrieved from http://www.aoa.gov/Aging_Statistics/Profile/2011/docs/2011profile.pdf

U.S. Department of Health and Human Services. (2013). *Older adults*. Retrieved from http://www.healthypeople.gov/2020/topics-objectives/topic/older-adults

U.S. Department of Health & Human Services; Centers for Disease Control (CDC); National Center for Injury Prevention and Control; Division of Unintentional Injury Prevention. (2005). *Check for safety: A home fall prevention checklist for older adults.* doi:10.1037/e307102005-001

USA Active Seniors. (2011). *Live like you mean it*. Retrieved from http://www.usaactiveseniors.com

Vind, A. B., Andersen, H. E., Pedersen, K. D., Jørgensen, T., & Schwarz, P. (2009). An outpatient multifactorial falls prevention intervention does not reduce falls in high-risk elderly Danes. *Journal of the American Geriatrics Society, 57*(6), 971-977. doi:10.1111/j.1532-5415.2009.02270.x

Watson, S., Zhang, Z. K., & Wilkinson, T. J. (2010). Nutrition risk screening in community-living older people attending medical or falls prevention services. *Nutrition & Dietetics, 67*(2), 84-89. doi:10.1111/j.1747-0080.2010.01424.x

Wikipedia. (2013). *Cerebellum*. File:Gray677.png. Retrieved from http://www.en.wikipedia.org/wiki/File:Gray677.png

Wilmoth, J. M. (2001). Living arrangements among older immigrants in the United States. *The Gerontologist, 41*(2), 228-238. doi:10.1093/geront/41.2.228

Wong, E. L. Y., Woo, J., Cheung, A. W. L, & Yeung, P.-Y. (2010). Determinants of participation in fall assessment and prevention programme among elderly fallers in Hong Kong: Prospective cohort study. *Journal of Advanced Nursing, 67*(4), 763-773. doi:10.1111/j.1365-2648.2010.05535.x

World Health Organization (WHO). (2007). *WHO global report on falls prevention in older age*. Retrieved from http://www.who.int/ageing/publications/Falls_prevention7March.pdf

Worthington, C. (2014). Health aging. *Healthy Aging® Magazine*. Retrieved from http://healthyaging.net/about-healthy-aging-magazine/

Yardley, L., Donovan-Hall, M., Francis, K., & Todd, C. (2006). Older people's views of advice about falls prevention: A qualitative study. *Health Education Research, 21*(4), 508-517. Retrieved from http://dx.doi.org/10.1093/her/cyh077

Yardley, L., & Todd, C. (2007). Promoting good balance: Encouraging older adults to undertake activities that improve balance. *The Journal on Active Aging, 6*(5), 46. Retrieved from https://www.escholar.manchester.ac.uk/uk-ac-man-scw:1d27887

Appendices

Appendix A

Application for Institutional Review Board Approval Form

University of the Incarnate Word

(PLEASE TYPE INFORMATION)
Title of Study: Fall prevention among older adults living in the community

College/School or Division/Discipline: University of the Incarnate Word

Investigators			
Principal Investigator - A UIW PI must be designated for all projects in which UIW is engaged in research.			
Name: Clarissa Lopez	Phone #: 210-347-5054	E-mail: clherrer@student.uiwtx.edu	Address: 7831 Black Oak Pass San Antonio, Texas 78223
Co-Investigator(s) – List all co-investigators and provide contact information on each one			
Name: Click here to enter text.	Phone #: Click here to enter text.	E-mail: Click here to enter text.	Address: Click here to enter text.
Faculty Supervisor of Project,Thesis, or Dissertation			
Name: Judith Beauford, Ph.D.	Phone #: 210-829-3171	E-mail: beauford@uiwtx.edu	Address: 4301 Broadway San Antonio, Texas 78209

Research Information		
Research Category: x Exempt ☐Expedited Review ☐Full Board Review		
Purpose of Study: The purpose of this quantitative study to investigate the perceptions of experience, adequacy and usefulness older adults have about fall prevention information received from healthcare providers during physician's office visits.		
Number of Subjects: 375	Number of Controls: None	Duration of Study: January2014-December 2014

Does this research involve any of the following:	YES	NO
Inmates of penal institutions	☐	x
Institutionalized intellectually handicapped	☐	x
Institutionalized mentally disabled	☐	x
Committed patients	☐	x
Intellectually handicapped outpatient	☐	x
Mentally disabled outpatient	☐	x
Pregnant women	☐	x
Fetus in utero	☐	x
Viable fetus	☐	x
Nonviable fetus	☐	x
Dead fetus	☐	x
In Vitro fertilization	☐	x
Minors (under 18)	☐	x

For each "Yes", state what precautions you will use to obtain informed consent?

How is information Obtained? (Include instruments used. Attach copy of instrument to this application.)
See Appendix

Confidentiality – Are data recorded anonymously? X Yes ☐No

If answer is "No", how will the study subjects' confidentiality be maintained?
Click here to enter text.

Benefit of research: The persons who will benefit from the study include physicians, nurses and allied healthcare professionals who administer fall prevention information. Healthcare professionals are in need of research that affords feedback of whether fall prevention information provided to older adults is adequate and will be used in the home environment to prevent falls.

Possible risk to subjects: None

Funding Source:	Funded by:	Grant Proposal Pending:	Not Funded: X
None	None	None	

CHECKLIST:

Research protocol ✓
Informed consent documents ✓
Instruments used for data collection ✓
CITI certificate of training on the protection of human subjects ✓

If change in research occurs the Board must be notified before research is continued.

SIGNATURES
Original Signatures are required. This application will not be processed until all signatures are obtained.
Signature of the Principal Investigator The undersigned accepts responsibility for the study, including adherence to DHHS, FDA, and UIW policies regarding protections of the rights and welfare of human subjects participating in the study. In the case of student protocols, the faculty supervisor and the student share responsibility for

adherence to policies.		
Print Name of Principal Investigator: **Clarissa Lopez**	**Signature of Principal Investigator:**	**Date: 12/02/2013**
Signature of Faculty Research Supervisor – Required By signing this form, the faculty research supervisor attests that he/she has read the attached protocol submitted for IRB review, and agrees to provide appropriate education and supervision of the student investigator above.		
Print Name of Faculty Supervisor: Judith Beauford	**Signature of Faculty Supervisor:**	**Date: 12/02/2013**
Signature of Co-investigator(s)		
Print Name of Co-Investigator: **1. Continue if there are more co-investigators. All must sign.**	**Signature of Co-Investigator:**	**Date:**
APPROVAL SIGNATURE(S)		
Signature of the IRB College/School Representative:		
Print Name of College/School Rep.:	**Signature of College/School Rep.:**	**Date:**
Signature of the IRB Chair (if needed)		
Print Name of IRB Chair:	**Signature of IRB Chair:**	**Date:**
Application Number:		
The Researcher must use copies of the **stamped** consent form. Other communications to the study subjects must also be stamped with the IRB approval number. Electronic surveys must have the IRB approval number inserted into the survey before they are used. IRBs are filed by their number and helps the Graduate Office keep track of submissions and communications. Please refer to this number when communicating about the IRB.		

Appendix B

Letter to Potential Sponsoring Healthcare Facility for a Study of

Fall Prevention Among Older Adults Living in the Community

University of the Incarnate Word

Dear Prospective Sponsoring Healthcare Facility:

I am (Clarissa Silva Lopez, a graduate student at UIW working towards a doctorate degree in education with a concentration in Higher Education.)

You are being asked to take part in a research study of Fall Prevention Among Older Adults Living in the Community. We want to learn the perspectives of the experience, adequacy and usefulness of fall information provided by healthcare professionals during physician office visits. You are being asked to take part in the study because you fit my participant study requirements. If you decide to take part in this study to be conducted at this healthcare facility, we will provide a full copy of the proposal for your review. At no time will the healthcare facility be named in presentation of the findings or in publication. There will be no discomforts, inconveniences or any other risk factors to the participants who desire to participate in the study. We do not guarantee that you will benefit from sponsoring this study and the benefits to human or scientific knowledge. The subjects will not receive an incentive except for the lunch these healthcare facilities provide. Everything we learn from the participants in the study will be confidential and cannot be identified with your healthcare organization. If we publish the results of the study, your healthcare facility will not be identified in any way. Your decision to sponsor this study is voluntary. You are free to choose not to sponsor the study or to stop sponsoring at any time. If you choose not to sponsor or to stop at any time, it will not affect your future status at UIW. If you have questions now, feel free to ask us. If you have additional questions later or you wish to report a problem that may be related to this study, contact (Judith Beauford, Ph.D., 210-829-3171). The University of the Incarnate Word committee that reviews research on human subjects, the Institutional Review Board, will answer any questions about your rights as a research sponsor (829-2759) (Dean of Graduate Studies and Research). You will be given a copy of this letter to keep. We would appreciate a written response to this request for the sponsorship as a study site to the University of the Incarnate Word.

Thank you in advance for your cooperation and support.

Sincerely,

Clarissa Lopez, Ph.D. Student
210-340-5054

Appendix C

Subject Consent to Take Part in a Study of Fall Prevention Among Older Adults Living in the Community

University of the Incarnate Word

I am Clarissa Lopez the primary investigator and a doctoral student at UIW working towards a doctorate degree in with a concentration in Higher Education.

You are being asked to take part in a research study of Fall Prevention Among Older Adults Living in the Community. I want to learn your perceptions of the experience, usefulness and adequacy of fall prevention information provided to you by healthcare workers during physician office visits. You are being asked to take part in this study because you are an older adult between the ages of 65-74. If you decide to take part, I will explain any concerns or questions you may have about the study.

There will be no discomforts, inconveniences, and other risks associated with this study.

We do not guarantee that you will benefit from taking part in this study.

There is no incentive to participating in this study.

Everything I learn about you in the study will be confidential. If we publish the results of the study, you will not be identified in any way.

Your decision to take part in the study is voluntary. You are free to choose not to take part in the study or to stop taking part at any time. If you choose not to take part or to stop at any time, it will not affect your future status at the healthcare facility.

If you have questions now, feel free to ask us. If you have additional questions later or you wish to report a problem that may be related to this study, contact Judith Beauford, Ph.D. at 210-829-3171.

The University of the Incarnate Word committee that reviews research on human subjects, the Institutional Review Board, will answer any questions about your rights as a research subject (829-2757—Dean of Graduate Studies and Research).

You will be given a copy of this form to keep.

YOUR SIGNATURE INDICATES THAT YOU CONSENT TO TAKE PART IN THIS RESEARCH STUDY AND THAT YOU HAVE READ AND UNDERSTAND THE INFORMATION GIVEN ABOVE AND EXPLAINED TO YOU.

_____*_ _____

Signature of Subject Signature of Witness

_____*_____

Signature of Subject/Assent (7+) Signature of Investigator

_____/_____

Date Time

Appendix D

Consentimiento del Sujeto para Tomar Parte en un Estudio de

Fall Prevention Among Older Adults Living in the Community

University of the Incarnate Word

Yo soy (Clarissa Lopez al investigador principal, por ejemplo; unestudiante graduado de UIW que esté completando su doctorado en educación con una concentración en Elevantado Educación.

Se le pide que tome parte en este studio sobre (Fall Prevention Among Older Adults Living in the Community).

Queremos que usted tome parte de esté studio Fall Prevention Among Older Adults Living in the Community porque quermos intender que precepción de educación información de prevencion recebes en la officia cuando vistas el doctor. Se le pide que tome parte de esté studio tienes los anos en setenta cinco esté seventa quarto y vives in la communidad.

Si usted decide tomar parte de esté studio, nosotros no incomodidades, inconveniencias y otros riesgos que podrian surgir, si hay algunos.

Los beneficios que esté studio pudier traer a los sujetos humanos, otros seres humanos, o al conocimiento cientifico. No garantizamos que usted se bendficie al tomar parte de esté.

Todo lo que aprendamos sobre usted en esté studio será confidencial. Si publicamos los resultados de esté studio, usted no sera identificado/a de ninguna manera.

Su decisión de tomar parte este studio es voluntaria. Usted tiene la libertad de decider no tomar parte en este studio. En caso de comenzar el studio, usted tiene la libertad de dejar de tomar parte en el mismo cuando usted quiera.

Si usted decide no tomar parte de est studio o si decide dejarlo cuando uste así lo desee, esto no afectará su status en centros de salud.

Si usted tiene preguntas ahora, siéntase en libertad de preguntarnos. Si luego usted tiene preguntas adicionales o si quiere reportar algún problema relacionado con este studio, comuníquese con Judith Beauford, Ph.D en numenro 210-829-3171.

El Comité de UIW que revisa la investigación en los sujetos humanos y la Junta de Revisión Institucional, contestarán cualquier pregunta acerca de sus derechos como sujeto de un studio. El teléfono del Decano de Investigación y Estudios Graduados es el 829-2759.

Usted recibirá una copia de esta formulario para que la conserve.

Su firma indica que usted acepta tomar parte de esté studio y de que ha leido y entienda la información ofrecida arriba en este formulario y que se le ha explicado a usted.

_____ _____

firma del sujeto firma del testigo

_____ _____

firm del sujeto/consetimiento más de siete anos firma del investigador

_____/_____

fecha (mes, dia, ano) hora

Appendix E

Letter to Potential Subjects for a Study of

Fall Prevention Among Older Adults Living in the Community

University of the Incarnate Word

Dear Prospective Participant:

I am (Clarissa Silva Lopez, a graduate student at UIW working towards a doctorate degree in education with a concentration in Higher Education.)

You are being asked to take part in this study because you are an older adult between the ages of 65-74. If you decide to take part, we will explain any concerns or questions you may have about the study.

There will be no discomforts, inconveniences, and other risks associated with this study.

We do not guarantee that you will benefit from taking part in this study to human or scientific knowledge.

There is no incentive to participating in this study.

Everything I learn about you in the study will be confidential. If we publish the results of the study, you will not be identified in any way.

Your decision to take part in the study is voluntary. You are free to choose not to take part in the study or to stop taking part at any time. If you choose not to take part or to stop at any time, it will not affect your future status with the healthcare facilities.

If you have questions now, feel free to ask us. If you have additional questions later or you wish to report a problem that may be related to this study, contact Judith Beauford, Ph.D., at 210-829-3171.

The University of the Incarnate Word committee that reviews research on human subjects, the Institutional Review Board, will answer any questions about your rights as a research subject (829-2757) (Dean of Graduate Studies and Research).

You will be given a copy of this form to keep.

Completion and return of the questionnaire indicates your consent to participate in this research. Continuing with the interview indicates your consent to participate in this research project.

Thank you in advance for your cooperation and support.

Sincerely,

Clarissa Lopez
210-347-5054

Appendix F

Carta Para Sujeto Tomar Parte En Un Estudio De

Fall Prevention Among Older Adults Living in the Community

University of the Incarnate Word

Yo soy (Clarissa Lopez al investigador principal, por ejemplo; unestudiante graduado de UIW que esté completando su doctorado en educación con una concentración en Elevantado Educación.

Se le pide que tome parte en este studio sobre (Fall Prevention Among Older Adults Living in the Community). Queremos que usted tome parte de esté studio Fall Prevention Among Older Adults Living in the Community porque quermos intender que precepción de educación información de prevencion recebes en la officia cuando vistas el doctor. Se le pide que tome parte de esté studio tienes los anos en setenta cinco esté seventa quarto y vives in la communidad.

Si usted decide tomar parte de esté studio, nosotros no incomodidades, inconveniencias y otros riesgos que podrian surgir, si hay algunos.

Los beneficios que esté studio pudier traer a los sujetos humanos, otros seres humanos, o al conocimiento cientifico. No garantizamos que usted se bendficie al tomar parte de esté.

Todo lo que aprendamos sobre usted en esté studio será confidencial. Si publicamos los resultados de esté studio, usted no sera identificado/a de ninguna manera.

Su decisión de tomar parte este studio es voluntaria. Usted tiene la libertad de decider no tomar parte en este studio. En caso de comenzar el studio, usted tiene la libertad de dejar de tomar parte en el mismo cuando usted quiera.

Si usted decide no tomar parte de est studio o si decide dejarlo cuando uste así lo desee, esto no afectará su status en centros de salud.

Si usted tiene preguntas ahora, siéntase en libertad de preguntarnos. Si luego usted tiene preguntas adicionales o si quiere reportar algún problema relacionado con este studio, comuníquese con Judith Beauford, Ph.D en numenro 210-829-3171.

El Comité de UIW que revisa la investigación en los sujetos humanos y la Junta de Revisión Institucional, contestarán cualquier pregunta acerca de sus derechos como sujeto de un studio. El teléfono del Decano de Investigación y Estudios Graduados es el 829-2759.

Usted recibirá una copia de esta formulario para que la conserve.

Su firma indica que usted acepta tomar parte de esté studio y de que ha leido y entienda la información ofrecida arriba en este formulario y que se le ha explicado a usted.

Gracias por adelantado por estar de acuerdomento y ayuda.

Sinceromento,

Clarissa Lopez
210-347-5054

Appendix G

Instrument

Fall Prevention Among Older Adults Living in the Community

Part I. Demographics:

1. Gender: ☐Male ☐Female
2. Ethnicity: ☐Hispanic ☐Caucasian ☐African America ☐Asian ☐Other
3. Age: ☐65 ☐66 ☐67 ☐68 ☐69 ☐70 ☐71 ☐72 ☐73 ☐74
4. Living Arrangements: ☐ I live alone ☐ I live with family ☐ I live with friends
5. ☐ I live in House ☐ I live in an Apartment ☐ I live in an adult living center
6. I learn best by: ☐ face to face, ☐ reading a pamphlet, or ☐ watching a video.
7. Have you fallen in the past year? Yes_____ No_____. If so, were in your home?_____.
8. If you answered yes to question 7, how many times have you fallen? _____.
9. Do you consider yourself: ☐ robust, ☐ healthy, ☐ frail.
10. Prior to today, where do get healthcare information? ☐ Doctors ☐ TV, ☐ Radio, ☐ Online, ☐ Pamphlets, ☐ News, ☐ Never received.

Part II.

This part of the survey is interested in your visit to the physician office and what type of fall information you learned about in the past year. Please Circle the most appropriate answer that fits your perception of the Fall Educational experience you have.

		Not Applicable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I would like to have fall prevention information presented to me in a language I can understand.	0	1	2	3	4	5
2	I find the fall prevention information beneficial to me.	0	1	2	3	4	5
3	I keep meaning to use the fall prevention information I received but have not got around to it.	0	1	2	3	4	5
4	I am more likely to pay attention to fall prevention information if it is provided by a doctor.	0	1	2	3	4	5
5	Fall prevention information is has been part of every physician visit.	0	1	2	3	4	5
6	I think the fall prevention information I received has been useful in preventing me from falling.	0	1	2	3	4	5

7	I use fall prevention information in my home when presented positively by a healthcare professional.	0	1	2	3	4	5
8	I received fall information in a negative manner by a healthcare professional.	0	1	2	3	4	5
9	I was given adequate fall prevention information from a healthcare provider.	0	1	2	3	4	5
10	I am more likely to pay attention to fall prevention information if provided in a video.	0	1	2	3	4	5
11	Fall prevention information I received was presented in a positive manner.	0	1	2	3	4	5
12	I am always asked if I have fallen since my last visit to a healthcare provider.	0	1	2	3	4	5
13	Fall prevention information I received was provided in a pamphlet when I visited my healthcare provider.	0	1	2	3	4	5
14	I find the fall prevention information I received to be useful to prevent falls in my home.	0	1	2	3	4	5
15	I have received fall prevention information in the last year from a physician office.	0	1	2	3	4	5
16	I fell at home and my physician referred me to a physical therapist.	0	1	2	3	4	5
17	I fell at home and my physician referred me to an occupational therapist.	0	1	2	3	4	5
18	I have received fall information from a wellness program.	0	1	2	3	4	5
19	I have received fall information from a nurse.	0	1	2	3	4	5
20	I have received fall information from an occupational therapist.	0	1	2	3	4	5
21	I have received from prevention information from a physical therapist.	0	1	2	3	4	5
22	I used fall prevention information I received at my physician's office to make changes in my home to prevent falls.	0	1	2	3	4	5
23	Fall prevention information is part of every visit to my healthcare provider.	0	1	2	3	4	5
24	I have been given fall prevention information at my physician's office on how to prevent falls in my home.	0	1	2	3	4	5
25	Fall prevention information is not offered when I see a healthcare provider.	0	1	2	3	4	5

Appendix H

Instrumento

Prevención de Caídas Entre Los Adultos Mayores Que Viven en la Comunidad

Demografía: Parte I.

1. Sexo: Masculino ☐ Mujer ☐
2. Raza:☐ Hispanic ☐ Caucasian ☐ A fro América ☐ Asian ☐ Otros
3. Edad: 65 ☐ 66☐ 67 ☐68 ☐ 69☐ 70 ☐ 71 ☐ 72 ☐ 73☐ 74 ☐
4. Arreglos de vivienda: Vivo solo ☐ Vivo con familia ☐ Vivo con mis amigos ☐
5. ☐ Yo vivo en la Casa ☐ Yo vivo en un apartamento ☐ Yo vivo en un centro de vida adulta
6. Aprendo mejor: ver una cara ☐ a cara, ☐ la lectura de un folleto, o ☐ viendo un video.
7. ¿Se ha caído en el último año? Si_____ No_____. Si es así, se encontraban en su casa?

   _____.
8. Si usted contestó sí a la pregunta 7, ¿cuántas veces te has caído? ____
9. ¿Se considera usted: ☐ robusta, ☐ saludable, ☐ frágil.
10. Antes de hoy, ¿dónde obtener la información de salud? ☐ médicos ☐ TV, ☐ Radio, ☐ Online, ☐ folletos, ☐ News, ☐ Nunca recibió.

Parte II.

Esta parte de la encuesta está interesado en su visita al consultorio del médico y qué tipo de información a aprender acerca de la caída durante su visita. Por favor circule la respuesta más apropiada que se adapte a su percepción de la experiencia educativa de otoño que tiene.

		No Aplicable	**Fuertemente no estar de acuerdo**	**No estar de acuerdo**	**Neutral**	**Acordar**	**Fuertemente acordar**
1	Me gustaría tener información de prevención de caídas me presenta en un idioma que pueda entender.	0	1	2	3	4	5
2	Creo que la información de prevención de caídas beneficioso para mí.	0	1	2	3	4	5
3	Sigo sentido a utilizar la información de prevención de caídas que recibí, pero no tengo tiempo para hacerlo.	0	1	2	3	4	5
4	Estoy más propensos a prestar atención a caer información de	0	1	2	3	4	5

	prevención si es proporcionada por un médico.						
5	Información sobre prevención de la caída se ha sido parte de cada visita al médico.	0	1	2	3	4	5
6	Creo que la información de prevención de caídas que he recibido ha sido de gran utilidad en la prevención me caiga.	0	1	2	3	4	5
7	Yo uso la información de prevención de caídas en mi casa cuando se presenta de manera positiva por un profesional de la salud.	0	1	2	3	4	5
8	Recibí información de caída de manera negativa por un profesional de la salud.	0	1	2	3	4	5
9	Me dieron la información adecuada prevención de caídas de un proveedor de atención médica.	0	1	2	3	4	5
10	Estoy más propensos a prestar atención a caer información sobre la prevención si se proporciona en un vídeo.	0	1	2	3	4	5
11	Información de prevención de caídas que recibí fue presentado de una manera positiva.	0	1	2	3	4	5
12	Siempre me preguntan si me he bajado desde mi última visita a un profesional de la salud.	0	1	2	3	4	5
13	Información de prevención de caídas que recibí fue proporcionada en un panfleto cuando visité a mi médico.	0	1	2	3	4	5
14	Creo que la información de prevención de caídas que he recibido para ser útil para prevenir las caídas en mi casa.	0	1	2	3	4	5
15	He recibido información de prevención de caídas en el último año de un consultorio médico.	0	1	2	3	4	5
16	Me quedé en casa y mi médico me referí a un fisioterapeuta.	0	1	2	3	4	5
17	Me quedé en casa y mi médico me referí a un terapeuta ocupacional.	0	1	2	3	4	5
18	He recibido información de caída de un programa de bienestar.	0	1	2	3	4	5
19	He recibido información de caída de una enfermera.	0	1	2	3	4	5
20	He recibido información de caída de un terapeuta ocupacional.	0	1	2	3	4	5
21	He recibido de información sobre la prevención de un fisioterapeuta.	0	1	2	3	4	5
22	He utilizado la información de prevención de caídas que he	0	1	2	3	4	5

	recibido en el consultorio de mi médico para hacer cambios en mi casa para evitar caídas.						
23	Información sobre prevención de caídas es parte de cada visita al profesional de la salud.	0	1	2	3	4	5
24	Se me ha dado la información de prevención de caídas en el consultorio de mi médico sobre la forma de prevenir las caídas en mi casa.	0	1	2	3	4	5
25	Información sobre prevención de la caída no se ofrece cuando veo a un médico.	0	1	2	3	4	5

Appendix I

Collaborative Institutional Training Initiative (Citi)

Social and Behavioral Responsible Conduct of Research

Curriculum Completion Report

Printed on 10/16/2013

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INSTITUTION	University of the Incarnate Word
EXPIRATION DATE	

SOCIAL AND BEHAVIORAL RESPONSIBLE CONDUCT OF RESEARCH: This course is for investigators, staff and students with an interest or focus in Social and Behavioral research. This course contains text, embedded case studies AND quizzes.

COURSE/STAGE:	RCR/1
PASSED ON:	10/16/2013
REFERENCE ID:	7612389

ELECTIVE MODULES	DATE COMPLETED	SCORE
Introduction to the Responsible Conduct of Research	10/16/13	No Quiz
Research Misconduct (RCR-SBE)	05/22/13	4/5 (80%)
Case Study Plagiarism (RCR-SBE)	05/22/13	2/2 (100%)
Data Management (RCR-SBE)	06/06/13	4/5 (80%)
Case Study - Data Management 'Who Owns Research Data?'(RCR-SBE)	06/06/13	3/3 (100%)
Authorship (RCR-SBE)	06/06/13	5/5 (100%)
Peer Review (RCR-SBE)	10/14/13	5/5 (100%)
Mentoring (RCR-Interdisciplinary)	10/14/13	4/5 (80%)
Using Animal Subjects in Research (RCR-Interdisciplinary)	10/16/13	4/5 (80%)
Conflicts of Interest (RCR-SBE)	10/16/13	6/6 (100%)
Collaborative Research (RCR-SBE)	10/16/13	4/5 (80%)
Research Involving Human Subjects (RCR-Interdisciplinary)	10/16/13	4/5 (80%)
The CITI RCR Course Completion Page	10/16/13	No Quiz

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Progam course site is unethical, and may be considered research misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Program Course Coordinator